

**REPORT OF THE OVERSIGHT COMMITTEE, NGT, U.P, LUCKNOW**

**IN THE MATTER OF:-**

**ORIGINAL APPLICATION NO. 384/2019**

**MRS. SUNITA PANDEY & ANR.**

**VS**

**UNION OF INDIA & ORS.**

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**REPORT OF OVERSIGHT COMMITTEE IN COMPLIANCE OF ORDER OF HON'BLE  
NATIONAL GREEN TRIBUNAL PASSED IN O.A. 384/2019 IN RE: MRS. SUNITA  
PANDEY & ANR. VERSUS UNION OF INDIA & ORS**

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**I. Introduction**

- The Hon'ble NGT dealing with the matter of O.A. No. 384/2019 vide order dated 28.01.2020 considered the issue of contamination of groundwater due to Arsenic and availability of clean drinking water in Bahraich, Ballia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Gorakhpur, LakhimpurKheri, Meerut, Mirzapur, Moradabad, Rai Bareilly, Sant Kabirnagar, Shajahanpur, Siddharth Nagar, Sant Ravidas Nagar and Unnao and certain other districts in Uttar Pradesh and other similarly affected areas in other parts of the country in the States of Assam, Bihar, Jharkhand, Karnataka, Punjab and West Bengal.
- In India, for the very first time, the Arsenic contamination in groundwater was reported in December 1983 in West Bengal.
- Arsenic is ubiquitous in the environment and highly toxic to all forms of the life. It is a crystalline "metalloid", a natural element with features intermediate between metals and non-metals, occurs naturally as an element, ranks as the 20<sup>th</sup> most occurring trace element in the earth's crust, 14<sup>th</sup> in seawater, and 12<sup>th</sup> in the human body.
- Arsenic exists mainly in four oxidation states– arsenate (As V), arsenite (As III), arsenic (As 0), and arsine (As III) and its solubility depends on the Ph and ionic environment. Among them, the As V being the most stable form.
- As V is thermodynamically stable state in aerobic water, while As III is predominant in reduced redox environment. Arsenic can be present in the environment in various chemical forms such as monomethylarsonic acid [MMA;CH<sub>3</sub>AsO(OH)<sub>2</sub>], dimethyl arsinic acid [DMA;(CH<sub>3</sub>)<sub>2</sub>AsOOH], trimethylarsine oxide [TMAO;(CH<sub>3</sub>)<sub>3</sub>AsO], arseno betaine [AsB;(CH<sub>3</sub>)<sub>3</sub>AspCH<sub>2</sub>COOH], arseno- choline [AsC], arseno sugars [AsS], arsenolipids etc.

- Recent findings suggested the following order in terms of acute As toxicity: MMA (III)> As(III)> As(V)> DMA(V)> MMA(V), where the MMA(III) metabolite is the most toxic compound and some researchers considered it to be the central As mode of action.

### **Sources of arsenic in the environment**

- The primary source of As in the environment (hydrosphere, pedosphere, biosphere and atmosphere) is the release of As from As-enriched minerals. The sources of As includes both natural i.e. through dissolution of As compounds adsorbed onto pyrite ores into the water by geochemical factors and anthropogenic i.e. through use of insecticides, herbicides and phosphate fertilizers, semi-conductor industries, mining and smelting, industrial processes, coal combustion, timber preservatives etc.
- According to the WHO guidelines, the limit of arsenic in drinking water is 0.01 mg/L. However, the levels of As in unpolluted surface water and groundwater vary typically from 1–10 µg/L. Groundwater concentrations of As is reported to be very large range from less than 0.5–5000 mg/L covering natural As contamination found in more than 70 countries.
- Contamination of drinking water is the main source of As for human being but for the population not exposed to elevated As in drinking water, consumption of food grown in As-contaminated soil or irrigated with As- contaminated water represents the main sources of As intake for humans, which causes a life-threatening problem for millions of people in large areas of South-East Asia.

### **Health hazards associated with arsenic**

- Arsenic enters in human beings through two pathways; first, direct consumption of As contaminated drinking water and second, for populations not exposed to elevated As in drinking water, foods represent the main sources of As intake for humans.
- Arsenic accumulation in vegetables followed by ingestion may result in a significant contribution onto the daily human intake of inorganic As. Arsenic contamination in drinking water threatens health risk for more than 150 million people all over the world.

- The various effects of As poisoning on human health are melanosis, leucomelanosis, keratosis, hyperkeratosis, dorsum, non-petting edema, gangrene and skin cancer. Melanosis and keratosis are the most common presentations among the affected peoples. Patients of leucomelanosis and hyperkeratosis have been found in many cases. Few cases of skin cancer have also been identified among the patients seriously affected by arsenite and arsenate.
- Chronic exposure to inorganic As causes several disorders upon different biological systems like digestive system, respiratory system, cardiovascular system, hematopoietic system, endocrine system, renal system, neurological system, and reproductive system which ultimately lead to cancer.
- Excessive and long-term (such as 5–10 years) human intake of toxic inorganic As having concentration above 0.05mg/L leads to arsenicosis, which is a common term used for As related health effects including skin problems, skin cancer, internal cancer (bladder, kidney, lung), diseases of the blood vessels of the legs and feet, and possibly diabetes, high blood pressure and reproductive disorders.
- Recently a news article published in MSN news<sup>1</sup> entitled, “1 Million Dead in 25 Years: Arsenic Contamination is Increasing Cancer Risks Across 200 Indian Cities”, describes the findings of Inner Voice Foundation mentioning that Currently around 200 districts in the northern part of the country in the Gangetic plain is at risk of drinking water contaminated by arsenic in India. The organization has also reported that around 10 lakh people have died in the last 25 years because of diseases caused by exposure to arsenic.
- A news article published in Weather News<sup>2</sup> entitled, “High Levels of Arsenic found in Groundwater in Uttar Pradesh” stated that as many as 2.34 crore people in rural areas of Uttar Pradesh are exposed to high levels of arsenic in groundwater. A total of 40 districts in the state are exposed to high concentration of arsenic in groundwater. Balia,

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<sup>1</sup> [1 Million Dead in 25 Years: Arsenic Contamination is Increasing Cancer Risks Across 200 Indian Cities \(msn.com\)](https://www.msn.com/en-in/news/health/1-million-dead-in-25-years-arsenic-contamination-is-increasing-cancer-risks-across-200-indian-cities)

<sup>2</sup> [High Levels of Arsenic found in Groundwater in Uttar Pradesh | The Weather Channel - Articles from The Weather Channel | weather.com](https://www.weather.com/news/india/arsenic-groundwater-uttar-pradesh)

Barabankhi, Gorakhpur, Ghazipur, Gonda, Faizabad and Lakhimpur Kheri are the worst-affected districts. A majority of them are in the floodplains of the Ganga, Rapti and Ghaghara rivers. Ten other districts with moderate risk of arsenic contamination are Shahjahanpur, Unnao, Chandauli, Varanasi, Pratapgarh, Kushinagar, Mau, Balrampur, Deoria and Siddharthnagar.

### **Remediation for arsenic contamination**

- Arsenic contaminated drinking water is a major threat to mankind. Although in small quantities it is necessary, however, it is known to be highly toxic if ingested in large dose. Its elevated concentrations are found in groundwater in some areas of India, Bangladesh, Chile, China, Argentina, Mexico, Hungary, Taiwan, Vietnam, Japan, New Zealand, Germany and the United States due to naturally occurring arsenic in the aquifer sediment.
- Thus, in order to reduce the health risk arising due to the direct consumption of As contaminated drinking water or due to the consumption of food/vegetables, grown in soil irrigated with As contaminated water, there is need to develop strategies that could alleviate toxicity and availability of As from soil to edible portions of food/vegetables.
  - a) **Oxidation and filtration:** The main purpose of oxidation is to convert the soluble As III to As V, which is then followed by precipitation of As V. This is essential for anaerobic groundwater because As III is the predominant form of As at neutral pH. Firstly, soluble As III is oxidized. Arsenic is mainly present as As V and, as such, is likely to be in the solid phase. Therefore, in such soils, As in groundwater used for irrigation is quickly adsorbed by iron hydroxides and becomes largely unavailable to plants.
  - b) **Biological oxidation:** It is relatively a new method of oxidation of iron and manganese as a treatment method for As removal. Biological treatment methods exploit natural biological processes that allow certain plants and microorganisms to help in the remediation of metals in soil and groundwater. This process is based upon the fact that As contaminated groundwater is usually reducing and containing

iron and manganese concentrations. In the treatment system, the following sequence of reactions have been found to occur: (i) oxidation of Mn (II) to Mn (IV) and Fe (II) to Fe (III), (ii) oxidation of As (III) to As (V), (iii) precipitation of manganese oxides, (iv) abiotic oxidation of As (III) by manganese oxides, and (v) As (V) sorption by manganese oxides, where steps (i) and (ii) are biotic and steps (iii) to (v) are abiotic.

- c) **Phytoremediation:** Phytoremediation is the plant based environmental-friendly technology, for the remediation of As contaminated sites, using plants and microbes to clean up contaminated air, soil and water. The *Pteris vittata* (Chinese brakefern) was found to be resistant to As, having the capability of hyperaccumulating large amounts of As in its fronds by area contaminants are picked up by the roots of plants and transported to their over-ground parts, and then removed together with the crops (phytostabilization, phytoextraction and phytovolatilization). The brake fern can accumulate between 1442–7526 mg/kg As in fronds from contaminated soils, and up to 27,000 mg/kg As in its fronds in hydroponics culture.
- d) **Coagulation-flocculation:** In As removal processes, coagulation and flocculation are among the most common method ever employed. The addition of a coagulant followed by the formation of a floc is a potential way for the removal of As from groundwater. Coagulants change the surface charge properties of solids to allow the agglomeration or enmeshment of particles into a flocculated precipitate. The final products are larger particles or floc, which settle under the influence of gravity or filtered more readily. The destabilization of colloids by neutralizing the forces that keep them apart, is the purpose of coagulation.
- e) **Electrocoagulation:** It is an alternative process to CF(coagulation/flocculation). Instead of adding a chemical reagent as ferric chloride, metallic cations are directly generated in the effluent to be treated by applying a current between iron electrodes to dissolve soluble anodes. In EC, electrolytic oxidation of a sacrificial iron anode produces Fe III oxyhydroxides/precipitates in As contaminated water.

f) **Adsorption:** Adsorption is a process that uses solids for removing substances from either gaseous or liquid solutions. Adsorption process has been used most widely because of its high removal efficiency, easy operation and handling, low cost and sludge-free. Recently, several studies have focused in the development of novel materials based on alumina, activated carbon, iron oxides, zeolites, clays etc. to adsorb As from water.

**Details of Projects undertaken by DST to address the problems of arsenic contamination**

Project titles	Name and Institution Address	Achievements
<p><b>AMRIT- Arsenic and Metal Removal by Indian Technology</b></p>	<p>Prof T. Pradeep, Professor, DST Unit of Nanoscience and Thematic Unit of Excellence on Clean Water, Department of Chemistry, Indian Institute of technology Madras, Chennai 600 036</p>	<p>Affordable, compact, gravity-fed water purification unit for providing clean drinking water in arsenic affected areas in which Arsenic and Iron-containing water are passed through a composite filter unit to obtain water, conforming to international standards.</p> <p>Implemented at various levels - homes, small communities and large scale water supply programs.</p> <p>200 household units demonstrated in Yadgiri District of Karnataka and Murshidabad district of West Bengal</p> <p>160 units of community filter demonstrated in Villages spread across the districts of Murshidabad and Nadia, West Bengal.</p> <p>The design is inspired by coconut thus making the innovation scientifically unique, green and sustainable.</p> <p>All materials and technologies are patented. Over 35 Indian/PCT patents have been filed.</p> <p>Arsenic Task Force of West Bengal government certified and approved the purifier.</p>

<p>Development of low-cost household filter for arsenic and other pollutant-free drinking water using modified laterite. Field trial of low-cost laterite based Arsenic filter: Domestic and community scale</p>	<p>Prof. Sirshendu De, Professor, Department of Chemical Engineering, Indian Institute of Technology, Kharagpur-721302</p>	<p>Development of efficient modified laterite adsorbent Design and installation of arsenic filter for domestic (120 L/day) and community (500 L/day) scale integrated with alum dosing to remove iron and bacterio-static carbon to remove coliform. Evaluation of 10 domestic filters and 1 community filter revealed successful performance.</p>
<p>Implementation of Cost Effective Household Arsenic Remediation Technology in West Bengal. Demonstration of Cost-Effective and Indigenous Domestic Arsenic Remediation Technology for Arsenic Mitigation in Arsenic affected areas of India</p>	<p>Dr. Pahari Basu, PI, Save the Environment, Kailash Ghosh Road, Kolkata- 700 008</p>	<p>Technology sourced from Naval Materials Research Laboratory (NMRL) Ambernath (DRDO). Design is cost effective, requires no power, environment friendly, easy to maintain &amp; operate. The utilisation of locally available processed waste of Steel The industry for co-precipitation of Arsenic with Iron. Demonstrated in 24 Paraganas (North) of West Bengal. 250 Arsenic removal filters were installed in the village Lalmath situated in Nadia district, benefitting 1250 villagers.</p>
<p>Laboratory-based studies on the evaluation of cost-effective adsorbents for Arsenic filter units</p>	<p>Dr. Nalini Sankararamkrishnan, Facility for Ecological and Analytical testing, Indian Institute of Technology, Kanpur-208 016</p>	<p>Development of Iron oxide coated/ Iron doped chitosan adsorbent Design of domestic filter Field studies on Arsenic contaminated groundwater Analysis of the sludge and leaching test for used adsorbent</p>
<p>Development of Arsenic adsorbing polymeric beads and their performance study in packed bed columns Development of</p>	<p>Prof. Priyabrata Sarkar, Department of Polymer Science and Technology, University of Calcutta, 92 A.P.C. Road, Kolkata</p>	<p>High capacity Arsenic adsorbing beads (17.5 mg/g of Arsenic V) based on synthesized nano- alumina disperse in chitosan grafted polyacrylamide. Development of ceramic filter candle containing adsorbents immobilized/ microencapsulated in a polymer</p>

prototype systems to produce Arsenic-free safe drinking water		matrix for removal of Arsenic from drinking water Interference and optimization studies required to assess suitability for field use.
Field Application and Management of community-based Arsenic Removal units in Rural Areas of West Bengal	Dr. Asis Mazumdar, School of water resource engineering, Jadavpur University 188 Raja S.C. Mulik Road, West Bengal-700032	Field model (800-1000 L/h) based on co-precipitation, adsorption and filtration mechanism developed for Arsenic removal. Handpumps attached units demonstrated at 3 locations, each benefiting around 50 families. The unit does not require to be operated under pressure. Possibility of upscaling for higher capacity
Continuous Arsenic Removal Using Zerovalent Iron Filter (ARUZIF) from Drinking Water Development of continuous mode arsenic removal technology for drinking water based on indigenous Zero Valent Iron	Dr. Sanjeev Chaudhari, Professor, Center for Environmental, Science and Engineering, Indian Institute of Technology, Bombay, Mumbai- 400 076	Development of a simple process that uses indigenous Zero Valent Iron (ZVI) and a specially designed unit (which ensures good oxygen transfer, separation of Hydrous Ferric Oxide (HFO) flocs and uses locally available low-cost granular media) for arsenic removal from drinking water. Two of these units are operating at a flow rate of 600 liters per hour in villages of West Bengal from February 2008. 46 more such units have been installed in various parts of Uttar Pradesh, Bihar, West Bengal, and Assam.
Development of clay-based biosorbents for purification of water contaminated with arsenic, iron and fluoride	Dr. Krishna Gopal Bhattacharya, Professor, Department of Chemistry, Gauhati University, Guwahati 781014	Development of novel material for low-cost removal of various contaminants including Arsenic. Feasibility of biosorbents for adsorption being studied.
Development of ceramic membrane-based contactor for	Mr. Swachchha Majumdar, Central Glass & Ceramic Research	An improved method for faster conversion of Arsenic III to Arsenic V using ceramic membrane-based contactor.

enhanced arsenic and iron oxidation for potential application in arsenic and iron removal plants	Institute, 196, Raja S.C Mullick Road, Jadavpur, Kolkata – 32	
Development of plant prototype for removal of ammonia, arsenic and odorous compounds from water/ wastewater by ozone micro-bubbles	Dr. Pallab Ghosh, Associate Professor, Indian Institute of Guwahati, Guwahati – 781 039,	Development and characterization of Zirconium based adsorbents Development of a new process using ozone microbubbles for Ammonia and Arsenic removal from wastewater.
Design consideration and field performance validation of high arsenic removal water filter packed with lab-bench developed materials: A lab-to-field technology transfer program	Dr. S. Chakrabarti, Presidency University, Kolkata.	Synthesis of cost-effective non-hazardous Manganese incorporated Ferric oxide (MnFO) Arsenic removal using synthesized nanoparticles of MnFO Efficiency in removal of high Arsenic, Nitrate, Chloride, Phosphate contaminated water established. Sludge analysis indicates non-hazardous nature of adsorbent
Ion-specific resins and membrane-based systems/ processes to bring the level of Arsenic to WHO limits in drinking water	Dr. K.M. Popat, CSMCRI, Bhavnagar, Gujarat	Pre-treatment of Arsenic contaminated water and removal of Arsenic by Reverse Osmosis (RO) process. Utilization of sludge as bricks and ensuring no Arsenic leached out from these bricks Mercuric Bromide coated test strips developed for sensitivity up to 25 ppb. Use of indigenously developed Arsenic specific resin for final polishing of water.
Low-cost technology for purification of Arsenic and microbes	Dr. (Mrs) Vijaya Agarwala, IIT Roorkee and National Institute of Hyderabad, Roorkee.	Use of magnetite and silver zinc oxide nanocomposites in the pores of charcoal for removal of Arsenic Project underway

contaminated water using nanotechnology		
Removal of Arsenic from drinking water using liquid membrane-based separation technique	Dr. Prabir Kumar Saha, Professor, Indian Institute of Guwahati, Guwahati	Identification of low cost, easily available and environmentally benign solvent (vegetable oil etc.) to extract Arsenic (solute) Study of separation process in continuous mode employing hollow fiber membrane and flat sheet membrane
Integrated technology for the removal of Arsenic from groundwater Field-scale trials of the ARI, Pune technology for the removal of arsenic from drinking water in Rajnandgaon District of Chhattisgarh.	Dr. K.M. Paknikar, Scientist, Agarkar Research Institute, Pune	<i>Microbacteriumlacticum</i> can oxidize arsenite ( $As^{3+}$ ) in groundwater rapidly to arsenate ( $As^{5+}$ ). Developed a unique 'integrated microbial oxidation alumina adsorption process for the removal of arsenic from groundwater rendering it completely safe. Feasibility on applicability of flat sheet liquid membrane-based separation process for removal of Arsenic from groundwater.
Removal of Arsenic from drinking water using polymeric membranes. Development of a low-cost adsorbent (Hydrogen Ferric Oxide) and household model for removal of Arsenic from underground water.	Dr. U.K. Kharul and Dr. G.P. Aggarwal, NCL, Pune & IIT Delhi, Hauz Khas, Delhi	Development of low-pressure ultrafiltration (UF) membrane process for effective and selective removal of Arsenic ( $As V$ ). Applicability of polyacrylonitrile (PAN) based negatively charged UF membrane for effective Arsenic removal. Membranes did not foul, worked for long and rejected 100% arsenic. However, efficacy reduced in the presence of Phosphate, Sulphate, Carbonate etc.
Development of multichannel ceramic membranes with optimum channel configuration for upscaling the	Dr. S. Bandyopadhyay, Scientist, Central Glass & Ceramic Research Institute, 196 Raja S.C. Mullick Road, Jadavpur, Kolkata 32	Hybrid process using suspended adsorption media and crossflow micro-filtration for decontamination of Arsenic. Optimum Channel Configuration (Circular and Star) for minimizing fouling of membrane surface.

technology for purification of Arsenic contamination groundwater.		
Integrated Arsenic and Iron removal from contaminated groundwater	Dr. Robin Kumar Dutta, Department of Chemical Sciences, Tezpur University, Napaam, Tezpur, Assam.	Development of a method based on oxidation-coagulation at optimum pH. Removes Arsenic as well as Iron from contaminated groundwater to below the WHO guideline levels of 10 ppb and 0.3 ppm, respectively. The technique uses three common chemicals, viz., baking soda (NaHCO <sub>3</sub> ) for pH conditioning, KMnO <sub>4</sub> for oxidizing As (III) to As (V) and Fe (II) to Fe (III), and FeCl <sub>3</sub> for coagulation and adsorption of Arsenic. The cost of material is less than 1 paise per liter of water. It is also user-friendly and works without electricity.

## II. ORDERS PASSED BY HON'BLE TRIBUNAL

- **Vide order dated 04.04.2019**, the Hon'ble Tribunal considered the problem of contamination of groundwater in District Ballia and other similar areas.
- The Hon'ble Tribunal also noted that the matter was highlighted in news item in Hindustan Times dated 26.11.2015 under the heading "Arsenic contamination on the rise: 1 Lakh dead, 3 lakh suffering" According to the said news item 7.04 crore people are affected by Arsenic related diseases in 12 States and 1 lakh persons have died as per report of a Committee of Secretaries. A Joint Inspection Report was filed before this Tribunal by the Central Pollution Control Board, MoEF&CC, CWGA and Uttar Pradesh Pollution Control Board to the effect that Arsenic Removal Units were not working properly. Heavy metals were seen in the water samples. In this regard, the Hon'ble Tribunal directed dismantling of hand pumps with concentration of Arsenic beyond permissible limits.

- The Hon'ble Tribunal also noted the report of the Neeti Ayog published in June, 2018 on "Water Management Index" to the effect that 70% water in India is contaminated. India is at 120th number out of 122 countries in water quality index. The report mentions that the acute water crisis is being faced by 600 million people. About two lakh people die every year due to inadequate access to safe water.
- In this regard, the Hon'ble Tribunal directed as follows:

*"12. While the report compiles the information and data, it is difficult to discern the progress achieved on ground level on the subject of removal or reduction of Arsenic contamination water by way of verifiable indicators on the subject of enhancement in access to the drinking water in the affected areas. There is also nothing to show the progress on the aspect of improvement in health standards in the affected areas. Monitoring expected in terms of order of this Tribunal is not merely compiling the information. The Tribunal expected fixing of specific miserable standards and benchmarks and reviewing progress in achieving such standards. Further, prescription of timelines for achieving the targets is crucial with the identified authorities accountable for achieving such targets.*

*13. Though we have noted that data with regard to Arsenic contamination has been placed on the website, it is desirable that the website also contains the above information regarding identified benchmarks and targets, timelines, persons accountable and progress with reference to the targets. The website needs to be made interactive so as to enable public participation on such a vital issue. Public participation may also be helpful in getting independent feedback of the progress achieved on the ground level. The website can be in the form of a helpline and not being in a passive form as now it appears to be.*

*14. Accordingly, we direct the Secretary, Ministry of Water Resources, Government of India to look into the above aspects and furnish a report of the steps taken within three months to this Tribunal by email [ngt.filing@gmail.com](mailto:ngt.filing@gmail.com), i.e., by 04.07.2019."*

- **Vide order dated 11.09.2019**, the Hon'ble Tribunal considered the affidavit filed by Ministry of Jal Shakti on 22.08.2019 mentioning the steps taken by Ministry of Jal shakti in this regard.

- In this regard, the Hon'ble Tribunal observed that:

*"11. The affidavit filed by the Ministry of Jal Shakti further goes into the question of responsibilities of different departments which need not be focused for our consideration. We may only note that the subject of regulation and control of groundwater management have been held to be covered by Entry 13 of List I as these subjects covered by international treaties. The Central legislation or administrative action for dealing with the subject is not out of place. Having regard to the fact that more than 1 Crore population of the Country is affected by the Arsenic contaminated water which is carcinogenic, issue of making available potable drinking water to the said population is a inalienable constitutional duty for which the Central Government as well as the States have to make all possible efforts. The problem being in several States, the Central Government should take lead in the matter in the interest of health and safety of large population of the Country.*

*12. Arsenic is one of major public health concern identified by the WHO. Under the new 2030 Agenda for Sustainable Development, the indicator of "safely managed drinking water services" calls for tracking the population accessing drinking water which is free of faecal contamination and priority chemical contaminants, including arsenic.*

*13. Accordingly, the existing plan of action needs to relooked as it has quite relaxed timelines and the strategies needs to redrawn by a suitable mechanism because of urgency in this matter. The concerned States may be pushed harder to reduce the timelines in the action plans and to also consider viable options of immediate supply of drinking water. This needs to be monitored by the Central Government on war footing to enforce Fundamental Right to access potable drinking water which is part of 'Right to Life' under the Indian Constitution.*

- **Vide order dated 28.01.2020**, the Hon'ble Tribunal considered the affidavit filed by Department of Drinking Water and Sanitation, Ministry of Jal Shakti on 13.12.2019 presenting the status of arsenic habitations as follows:

State	As on 25.03.2019		As on 25.06.2019		As on 09.12.2019		As on 26.01.2020	
	No. of Arsenic affected habitations	Population	No. of Arsenic affected habitations	Population	No. of Arsenic affected habitations	Population	No. of Arsenic affected habitations	Population
Assam	4,301	16,07,660	4,293	16,05,148	3,343	12,53,702	3,309	12,42,151
Bihar	807	12,05,934	804	12,01,715	336	5,15,474	335	5,14,396
Jharkhand	19	13,336	19	13,336	03	6,714	3	6,714
Karnataka	3	2,590	2	1,706	0	0	0	0
Panjab	652	8,28,073	660	8,36,625	646	8,22,381	644	8,20,192
Uttar Pradesh	707	5,32,507	650	4,57,893	607	4,09,918	606	4,09,180
West Bengal	9,126	93,19,930	7,544	69,93,938	6,207	55,24,893	5,304	44,50,889
<b>Total</b>	15,615	1,35,10,030	13,972	1,11,10,361	11,142	85,33,082	10,201	74,43,522

- In this regard, the Hon'ble Tribunal observed that there is hardly any improvement in the situation in the State of Punjab. Progress with regard to State of Uttar Pradesh, Assam and Bihar is not adequate. The problem is acute in State of West Bengal. Accountability needs to be fixed on erring officers and timelines for total remedial needs to be preponed to 31.12.2020 in view of serious health consequences. In the interim period, alternate arrangements need to be made for the supply of safe potable water to inhabitants of affected areas.
- **Vide order dated 04.08.2020**, the Hon'ble Tribunal considered the affidavit submitted by Ministry of Jal Shakti on 12.05.2020 mentioning the steps taken for mitigation of arsenic. The affidavit stated that targeted date of December 2020 for remediation of Arsenic is likely to be achieved in the States of Bihar, Jharkhand and Uttar Pradesh but in State of Punjab, two habitations may go beyond December 2020.

- In this regard, the Hon'ble Tribunal directed as follows:
  1. *Jal Nigam has indicated that the remaining 164 habitations would be covered:*
    - a) *By laying down piped water supply in 44 habitations by December 2020*
    - b) *By laying down piped water supply in 45 habitations by March 2021*
    - c) *By installing 120 ARUs by December 2020.*

*Since NGT has directed preponing the time lines from March 2012 to December 2020, Jal Nigam may be directed to expedite the work in the above mentioned 45 habitations so as to prepone the completion by 3 months.*

*2. The work of dismantling the hand pumps in Arsenic polluted habitations has not been done. It should be completed in the next 3 month and responsibility for negligence be fixed by Chief Secretary.*

*3. Health Department may conduct a health survey in the affected areas in next 3 months and present a micro plan indicating the health hazards and their mitigation strategy to NGT in 6 months' time.*

*4. The Agriculture Department may conduct a study to assess the impact of Arsenic on the food chain. They may prepare the impact assessment plan in 6 months' time along with mitigation strategy like change in cropping pattern, modification in agricultural practices etc.*

*5. The Panchayati Raj Development may work out a plan for ensuring involvement of Panchayats in operation and maintenance of these projects. The funds for operation/maintenance may be permitted from the devolution grants given to Panchayats.*

*6. Water Harvesting Schemes for harvesting rain water may be aggressively pursued in these villages. The State Government may make extra budgetary provisions/extra allocation in MGNREGA for Water Harvesting Schemes in these villages.*

*7. Jal Nigam may be directed to conduct an annual survey every year of the quality of drinking water in this area and the adjoining areas to assess the impact of the mitigation measures on a continuous basis.*

### III. MINUTES OF MEETING BY OVERSIGHT COMMITTEE, NGT

This Oversight committee constituted by Hon'ble NGT held a meeting with concerned administrative officers on 15.01.2021. Various issues as pointed out in the orders of Hon'ble National Green Tribunal were discussed and status of the action taken by the concerned authorities was reviewed.

The highlights of the meetings are as follows:

- JMD, UP Jal Nigam, Shri Sushil Kumar Patel, mentioned that as on 30.06.2020, there were 164 arsenic affected habitations in the State. Out of these 164 habitations, 45 are covered with piped water supply as of now. The remaining 119 habitations have been covered by the Community Water Purification Plant.
- With regard to the verification of the quality of water in the areas where Jal Nigam has completed the work, Shri. A. K. Tiwari, CEO, UPPCB, informed that from the entire State of U.P., 180 groundwater samples were to be collected. Out of 180 samples, till now they have collected and analysed 70 samples in total from different districts of the State and arsenic contamination was not found in any of these analysed sample.
- With regard to the impact studies of arsenic on food chain, Director, Agriculture Department, informed that they had collaborated with NBRI, Lucknow to perform this study. NBRI has performed this study in 20 districts covering 264 blocks in the State for which draft report has been submitted by NBRI to Agriculture Department and final report will be submitted within a month.
- Dr. Shipra Pandey, Nodal Officer, Health Department, informed that Health Department has conducted health survey under Mukhya Mantri Arogya Swastha Mela in the districts mentioned in this OA.

The detailed Minutes of Meeting is annexed as **Annexure-I**.

### IV. COMPLIANCE STATUS BY UPPCB

- In compliance with the order of Hon'ble Tribunal, UPPCB has submitted compliance report dated 28.12.2020 mentioning that Regional Offices of UPPCB

have collected groundwater samples from Lucknow, Gorakhpur, Basti and Moradabad.

- In Lucknow, water samples were collected from 17 handpumps, in Gorakhpur, water samples were collected from 33 handpumps, in Basti, water samples were collected from 18 handpumps, and in Moradabad, water samples were collected from 06 handpumps.
- According to the analysis report, the concentration of arsenic in the water samples of 69 handpumps were within the set limits.

The detailed analysis report of water samples collected from the handpumps of different Districts submitted by UPPCB is annexed as **Annexure-II**.

#### V. COMPLIANCE STATUS BY HEALTH DEPARTMENT

- Department of Health and Family Welfare has submitted compliance report dated 15.01.2021 stating that had taken the opportunity of the Mukhya Mantri Arogya Swathya Mela to conduct health camps in various places in every district.
- The total number of health camps conducted in district Bahraich, Ballia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Gorakhpur, LakhimpurKheri, Meerut, Mirzapur, Muradabad, Rai Bareilly, Santkabirnagar, Shajahanpur, Siddharthnagar, SantRavidas Nagar and Unnao were 980 and the total number of patients who have come up to the camp were 75236.
- The details of the report are as follows:

No. of patients (Liver)	No. of patients (Respiratory)	No. of patients (Gastro)	No. of patients (Diabetes)	No. of patients (Skin)	No. of patients (TB suspected)	No. of patients (Anemia)	No. of patients (hypertension)	No. of patients (cancer)	No. of patients Referred
2481	5663	7089	3243	11512	438	2169	2284	79	1610

The detailed health survey report conducted by Health Department is annexed as **Annexure III**.

## VI. COMPLIANCE STATUS BY UP JAL NIGAM

UP Jal Nigam has submitted compliance report dated 14.01.2021 mentioning the following:

- As on 30.06.2020, there were 164 arsenic affected habitations in the State. Out of these 164 habitations, 45 are covered with piped water supply as of now. The remaining 119 habitations have been covered by the Community Water Purification Plant.

Date	No. of arsenic affected habitations	Population
As on 25-03-2019	707	532507
As on 25-06-2019	650	457893
As on 31-03-2020	344	293441
As on 30-06-2020	164	233647
As on 30-09-2020	124	196652
As on 30-11-2020	123	195350
As on 31-12-2020	119	191850

- Identification and mapping of handpumps having Arsenic concentration beyond BIS permissible limit has been done. The handpumps are maintained by Panchayati Raj Department and in order to comply with the order of Hon'ble Tribunal with regard to dismantling of handpumps, UP Jal Nigam has sent letter to Director, Panchayati Raj Department on 27.07.2020.

The detailed compliance report submitted by UP Jal Nigam is annexed as **Annexure IV**.

## VII. COMPLIANCE STATUS BY PANCHAYATI RAJ DEPARTMENT

Panchayati Raj Department, UP has sent letter to UP Jal Nigam dated 09.10.2020 mentioning that Gram Panchayat is undertaking the work of reboring of the installed handpumps in the rural areas. The letter also mentioned that in the mandate no provision has been made by the Gram Panchayat regarding dismantling of handpumps. Further, in the letter a request was made to UP Jal Nigam to commence the work of dismantling of installed handpumps in the arsenic affected areas.

The copy of letters sent by Panchayati Raj Department to UP Jal Nigam is annexed as **Annexure-V.**

**VIII. SUMMARY OF COMPLIANCE STATUS AS OF 17.01.2021**

S. No.	Directions by Hon'ble Tribunal	Concerned Department	Compliance status
1.	<p>Jal Nigam has indicated that the remaining 164 habitations would be covered:</p> <p>a) By laying down piped water supply in 44 habitations by December 2020</p> <p>b) By laying down piped water supply in 45 habitations by March 2021</p> <p>c) By installing 120 ARUs by December 2020.</p> <p>Since NGT has directed preponing the time lines from March 2012 to December 2020, Jal Nigam may be directed to expedite the work in the above mentioned 45 habitations so as to prepone the completion by 3 months.</p>	UP Jal Nigam	<p><b>Complied</b></p> <p>As on 30.06.2020, there were 164 arsenic affected habitations in the State. Out of these 164 habitations, 45 are covered with piped water supply as of now. The remaining 119 habitations have been covered by the Community Water Purification Plant.</p>
2.	<p>The work of dismantling the hand pumps in Arsenic polluted habitations has not been done. It should be completed in the next 3 month and responsibility for negligence be fixed by Chief Secretary.</p>	UP Jal Nigam/Panchayati Raj Department	<p><b>Non-complied</b></p> <p>Identification and mapping of handpumps having Arsenic concentration beyond BIS permissible limit has been done by UP Jal Nigam. The handpumps are maintained by Panchayati Raj Department and in order to comply with the order of Hon'ble Tribunal with regard to dismantling of handpumps, UP Jal Nigam has sent letter to Director, Panchayati Raj Department on 27.07.2020.</p> <p>Panchayati Raj Department,</p>

			UP has sent letter to UP Jal Nigam dated 09.10.2020 mentioning that Gram Panchayat is undertaking the work of re boring of the installed handpumps in the rural areas. The letter also mentioned that in the mandate no provision has been made by the Gram Panchayat regarding dismantling of handpumps. Further, in the letter a request was made to UP Jal Nigam to commence the work of dismantling of installed handpumps in the arsenic affected areas.
3.	The Agriculture Department may conduct a study to assess the impact of Arsenic on the food chain. They may prepare the impact assessment plan in 6 months time along with mitigation strategy like change in cropping pattern, modification in agricultural practices etc.	Agriculture Department	<b>Partially complied</b> Agriculture Department has collaborated with NBRI, Lucknow to perform impact assessment study of arsenic on food chain. NBRI has performed this study in 20 districts covering 264 blocks in the State for which draft report has been submitted by NBRI to Agriculture Department and final report will be submitted within a month.
4.	Jal Nigam may be directed to conduct an annual survey every year of the quality of drinking water in this area and the adjoining areas to assess the impact of the mitigation measures on a continuous basis.	UP Jal Nigam	<b>Non-complied</b> No information provided.
5.	Health Department may conduct a health survey in the affected areas in next 3 months and present a micro	Health Department	<b>Partially Complied</b> Department of Health and Family Welfare has submitted compliance report dated

	<p>plan indicating the health hazards and their mitigation strategy to NGT in 6 months time.</p>	<p>15.01.2021 stating that had taken the opportunity of the Mukhya Mantri Arogya Swathya Mela to conduct health camps in various places in every district.</p> <p>The total number of health camps conducted in district Bahraich, Ballia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Gorakhpur, LakhimpurKheri, Meerut, Mirzapur, Muradabad, Rai Bareilly, Santkabirnagar, Shajahanpur, Siddharthnagar, SantRavidas Nagar and Unnao were 980 and the total number of patients who have come up to the camp were 75236.</p>
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#### **IX. RECOMMENDATIONS BY OVERSIGHT COMMITTEE, NGT**

In view of the above, we recommend as follows:

- i. With regard to dismantling of hand-pumps in arsenic affected habitations, only identification and mapping of hand-pumps having arsenic concentration greater than BIS limit has been done till date. No action has been taken with regard to dismantling of hand-pumps. UP Jal Nigam/Panchayati Raj Department may be directed to commence the work without any further delay and Chief Secretary, UP may be directed to fix the responsibility of inaction.
- ii. In order to have a complete check on the arsenic contamination in groundwater and impact of mitigation measures, it is necessary to conduct surveys to assess the quality of drinking water in arsenic contaminated habitations. UP Jal Nigam may be directed to conduct annual surveys in the areas/districts contaminated with arsenic and their adjoining areas.

- iii. Water Harvesting Schemes for harvesting rain water may be aggressively pursued in these villages. The State Government may make extra budgetary provisions/extra allocation in MNREGA for Water Harvesting Schemes in these villages.
- iv. The Panchayati Raj Development may work out a plan for ensuring involvement of Panchayats in operation and maintenance of these projects. The funds for operation/maintenance may be permitted from the devolution grants given to Panchayats.
- v. Health Department has conducted only health survey in the arsenic affected areas but no micro plan indicating health hazards and mitigation strategy is presented. Health Department may be directed to submit a micro plan mentioning the same within next two months.
- vi. Agriculture Department may be directed to explore the possibilities of cultivation of arsenic resistant plant varieties which may reduce the impact of arsenic on food chain.
- vii. UP PCB/Panchayati Raj Department may be directed to undertake campaigns to make the people aware about rooftop rain water harvesting system.
- viii. UPPCB may be directed to collaborate with different research institutes to explore and develop the possible use of filtration system for groundwater based on the concept of 'Arsenic Filters for Groundwater in Bangladesh'.
- ix. The strategies of bioremediation of soil using arsenic tolerant bacteria and/or phytoremediation using hyperaccumulating plants may be promoted as cleaning process to prevent the leaching of contaminant in water.
- x. The approaches such as "Microbial-based Phytoremediation" which is based on the association of metal tolerant bacteria in rhizosphere of hyperaccumulating plant may also be undertaken for arsenic treatment in highly contaminated environment.
- xi. The possibility of using biochar as soil amendment and sorption of heavy metals from contaminated soils may also be explored. Such techniques not only reduce waste but also helps in providing green and sustainable solutions in areas contaminated with metal pollution. UPPCB may be directed to collaborate with

institutes of repute to explore the applications of such techniques in the areas contaminated with heavy metals in the State.

The Member Secretary, UPPCB is directed to send this report to the Registrar General, National Green Tribunal, Principal Bench, New Delhi for placing the same before the Hon'ble Tribunal with a copy to the Chief Secretary, Government of Uttar Pradesh for necessary action. The report also be uploaded on the website of the Committee.

20-01-2021

20-01-2021

**X** Anup Chandra Pandey

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Dr Anup Chandra Pandey  
Member, Oversight Committee  
Signed by: ANUP CHANDRA PANDEY

**X** SVS Rathore

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Justice SVS Rathore  
Chairman, Oversight Committee  
Signed by: SURENDRA VIKRAM SINGH RATHORE

January 20, 2021

Annexures: As above

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Meeting No. 93

**MINUTES OF MEETING OF THE OVERSIGHT COMMITTEE, NGT UP LUCKNOW,**  
**HELD ON 15.01.2021 AT 11:00 A.M IN OA NO. 384/2019 IN RE:**  
**MRS. SUNITA PANDEY & ANR. VS UNION OF INDIA & ORS.**  
**THROUGH VIDEO-CONFERENCING**

\*\*\*

**Present:**      **Hon'ble Mr. Justice S.V.S Rathore, Chairman**  
                     **Hon'ble Dr Anup Chandra Pandey, Member**

**Other dignitaries present:**

1. Shri Anurag Yadav, Secretary, Urban Development Department
2. Shri A. P. Srivastava, Director, Agriculture Department
3. Dr. Shipra Pandey, Nodal Officer, Health Department
4. Shri Sushil Kumar Patel, JMD, UP Jal Nigam
5. Shri A. K. Tiwari, CEO, UPPCB
6. Shri D. K. Soni, Additional Director, CPCB
7. Shri Vikas Ranjan, CGWD, Lucknow
8. Shri S. D. Singh, Urban Development Department

The meeting was held as scheduled

The Committee reviewed the problem of contamination of groundwater due to arsenic and availability of clean drinking water in districts of Bahraich, Ballia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Gorakhpur, Lakhimpur Kheri, Meerut, Mirzapur, Moradabad, Rai Bareilly, Sant Kabir Nagar, Shahjahanpur, Siddharth Nagar, Sant Ravidas Nagar and Unnao of Uttar Pradesh in the light of directions of Hon'ble NGT vide its order dated 23.08.2019 in **O.A. No. 384 of 2019** in re: *Mrs. Sunita Pandey and Anr vs Union of India and others.*

This matter is going on since 2015. Hon'ble NGT noted the gravity of the situation shown by high arsenic content in these districts resulting in serious diseases and environmental damage. 28 Districts of Uttar Pradesh were identified as affected

by the problem in the report prepared by the State Water Resources Agency, Uttar Pradesh. The Ministry of Environment, Forest & Climate Change found a number of deaths from diseases on account of this problem. The Ministry of Drinking Water and Sanitation also took cognizance and identified mitigation measures. Ministry of Agriculture also identified steps to be taken. U.P. Jal Nigam identified 310 hamlets in 179 revenue villages in district Ballia and 165 hamlets in 49 revenue villages in district Lakhimpur Kheri where arsenic content in ground water was in excess of the permissible limit of 0.05 mg/L. Central Ground Water Board identified 28 districts in UP, where the underground water in wells had exceeded the Maximum Contaminant Level (10 ppb/WHO Standard).

Hindustan Times on 26.11.2015, under the heading “Arsenic contamination on the rise: 1 Lakh dead, 3 Lakh suffering’, mentioned that 7.04 crore people were affected by Arsenic related diseases in 12 States and 1 lakh persons have died as per report of a Committee of Secretaries. A Joint Inspection Report of Central Pollution Control Board, MoEF&CC, CWGA and Uttar Pradesh Pollution Control Board was filed before Hon’ble NGT mentioning that Arsenic Removal Units were not functioning properly. Hon’ble NGT directed dismantling of hand pumps in areas where concentration of arsenic was beyond permissible limits. Niti Ayog in June 2018 mentioned that 70% water in India is contaminated and thus, acute water crises is being faced by 600 million people.

An affidavit was filed before Hon’ble NGT jointly by the Ministry of Drinking Water & Sanitation and the Ministry of Water Resources on 30.03.2019 mentioning that 1.3 crore population in India are affected by this problem in seven States including Uttar Pradesh. The affidavit mentioned that though water supply is responsibility of the State Government, yet the Central Government is providing financial and technical assistance. National Rural Drinking Water Programme (NRDWP) is a centrally sponsored scheme under which the State Governments can

take up this remediation. Further programme viz National Water Quality Sub Mission (NWQSM) was launched to provide safe drinking water. Hon'ble NGT felt that these efforts were inadequate. Hon'ble NGT expected that standards be laid, and progress be monitored against those standards. Another affidavit was filed by Ministry of Jal Shakti before Hon'ble NGT on 22.08.2019, in which it was reiterated that drinking water was a State subject and the Central Government was providing technical and financial assistance through schemes like NRDWP and NWQSM. 27544 arsenic/fluoride affected rural habitations including 260 habitations from Uttar Pradesh had been taken up under NWQSM. Still certain habitations were left out. They would be covered under NRDWP. Ministry of Jal Shakti informed that number of arsenic affected habitations in Uttar Pradesh, which were 707 in number on 25.03.2019, came down to 150 on 25.06.2019. It was mentioned that Ministry of Housing does not provide any strategic funding for obtaining mitigation nor does it maintain any data. However, water quality problems including arsenic can be taken up under their Amrut Scheme. It was mentioned that Department of Science and Technology also does some research in the field of arsenic mitigation. Ministry of Health has also issued certain guidelines for management of Arsenicosis. Hon'ble NGT while reviewing all these aspects on 23.08.2019 felt that existing plan of action needs to be relooked and timelines need to be reduced to enable immediate supply of drinking water so that the access to potable drinking water, which is part of 'Right to Life' under the Indian Constitution is enforced.

The Oversight Committee reviewed the progress of the steps taken by the State Government in the light of the order of Hon'ble NGT dated 04.08.2020.

JMD, UP Jal Nigam, Shri Sushil Kumar Patel, mentioned that as on 30.06.2020, there were 164 arsenic affected habitations in the State. Out of these 164 habitations, 45 are covered with piped water supply as of now. The remaining 119 habitations have been covered by the Community Water Purification Plant. The

Committee has directed UP Jal Nigam to submit the annual report regarding the quality assessment of drinking water in the arsenic affected areas and adjoining areas to assess the impact of the mitigation measures on a continuous basis.

With regard to the verification of the quality of water in the areas where Jal Nigam has completed the work, Shri A. K. Tiwari, CEO, UPPCB, informed that from the entire State of U.P., 180 groundwater samples were to be collected. Out of 180 samples, till now they have collected and analysed 70 samples in total from different districts of the State and arsenic contamination was not found in any of these analysed sample. Moreover, particularly for Bahraich District the samples were to be collected by CPCB and CGWA. The Committee directed UPPCB to submit the groundwater analysis report.

Further, in this regard, Dr. D. K. Soni, Additional Director, CPCB informed that they have not collected and analysed any sample till now due to lack of staff and upgradation in their laboratories. The Committee has expressed displeasure that CPCB has not performed any work in this regard since July 2020 and will not be able to complete the work by March 2021 due to the above-mentioned reasons. The Committee has directed the Chairman, CPCB to take action in this regard and also direct Dr. D. K. Soni to comply with the directions of Hon'ble Tribunal and Oversight Committee.

With regard to the impact studies of arsenic on food chain, Director, Agriculture Department, informed that they had collaborated with NBRI, Lucknow to perform this study. For this, they have allocated Rs. 18 Cr 68 Lakhs to NBRI. Further he informed that NBRI has performed this study in 20 districts covering 264 blocks in the State for which draft report has been submitted by NBRI to Agriculture Department and final report will be submitted within a month. Director, Agriculture Department, has also mentioned that they are about to start field trails of arsenic resistant paddy variety recommended by UP Council of Agriculture Research. One

such variety is Mukta. After successful trails, such arsenic resistant varieties will be developed and provided to farmers for cultivation so that it will reduce the impacts of arsenic on food chain. The Committee has directed Agriculture Department to submit the progress report in this regard.

Dr. Shipra Pandey, Nodal Officer, Health Department, informed that Health Department has conducted health survey under Mukhya Mantri Arogya Swastha Mela in the districts Bahraich, Ballia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Gorakhpur, Lakhimpur Kheri, Meerut, Mirzapur, Moradabad, Rai Bareilly, Sant Kabir Nagar, Shahjahanpur, Siddharth Nagar, Sant Ravidas Nagar and Unnao of Uttar Pradesh. The total number of camps conducted in the abovementioned districts were 980 and the total number of patients who have attended the health camps were 75236.

15-01-2021

15-01-2021

**X** Anup Chandra Pandey

Dr Anup Chandra Pandey  
Member, Oversight Committee  
Signed by: ANUP CHANDRA PANDEY

**X** SVS Rathore

Justice SVS Rathore  
Chairman, Oversight Committee  
Signed by: SURENDRA VIKRAM SINGH RATHORE

January 15, 2021

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उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड  
UTTAR PRADESH POLLUTION CONTROL BOARD

Annexure-2

Ref. No. 34485 / सी-6/आ०/172/सुनीता पाण्डेय/20

Dated 28.12.20

सेवा में,

श्री एल०एन० सोनी,  
निजी सचिव,  
माननीय अध्यक्ष, ओवर साइट कमेटी, माननीय एन०जी०टी०,  
पर्यावरण निदेशालय, विनीत खण्ड-1, गोमती नगर,  
लखनऊ।

**विषय:** मा० एन०जी०टी० नई दिल्ली में विचाराधीन ओ०ए० सं०-384/2019 सुनीता पाण्डेय एवं अन्य बनाम युनियन ऑफ इण्डिया एवं अन्य में पारित आदेश दिनांक 23.08.2019 एवं 24.08.2019 के सम्बन्ध में।

महोदय,

कृपया उपरोक्त विषयक इस कार्यालय के पत्रांक-जी.33843/सी०-6/ओ०ए०नं०-384/2019/सुनीता पाण्डेय/2020 दिनांक 08.10.2020 का संदर्भ ग्रहण करने का कष्ट करें। उक्त के अनुक्रम में बोर्ड के क्षेत्रीय कार्यालय लखनऊ द्वारा कुल-17 हैण्डपम्पों के जल के नमूने, क्षेत्रीय कार्यालय, गोरखपुर द्वारा कुल-33 हैण्डपम्पों के जल के नमूने, बस्ती द्वारा कुल-18 हैण्डपम्पों के जल के नमूने तथा मुरादाबाद द्वारा कुल-06 हैण्डपम्पों के जल के नमूने की विश्लेषण आख्या प्रेषित की जा रही है। विश्लेषण आख्या के अनुसार कुल-69 हैण्डपम्प के जल के नमूने में आर्सेनिक की मात्रा निर्धारित मानकों के अनुरूप है। कुल-69 हैण्डपम्प के जल के नमूने की विश्लेषण आख्या संलग्न कर प्रेषित की जा रही है।

अग्रेतर बोर्ड के क्षेत्रीय कार्यालय आजमगढ़ को हैण्डपम्प के जल के नमूनों को एकत्र कर विश्लेषण हेतु बोर्ड के केन्द्रीय प्रयोगशाला लखनऊ में जमा कराने हेतु पुनः निर्देश दिये गये हैं।

संलग्नक:-यथोपरि।

भवदीय,

(ए०के० तिवारी)

मुख्य पर्यावरण अधिकारी  
(वृत्त-6)



**CENTRAL LABORATORY, U.P. POLLUTION CONTROL BOARD**  
T.C.-12 V, Vibhuti Khand, Gomti Nagar, Lucknow-226010  
Phone: 0522-2720832, 2720480



**TEST REPORT: WATER LABORATORY (GROUND WATER)**

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report 26/11/2020

Dt./period of testing...

1. नमूने का स्रोत/समष्टि/सतह/संपूर्ण/हाथ/संपूर्ण/अन्य (Sample Source/Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/any other specify) 14/10/2020 to 21/10/2020
2. नमूने का प्रकार (संग्रह/संयोजित/एकीकृत) / Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by Shri Anil Kumar VISHWAKARMA S.A
4. पत्रिका नमूने का पैकेट/रंग/संख्या / Colour & Odour 2L
5. पत्रिका नमूने की मात्रा एवं पैकेटिंग / Quantity & Packing (Plastic Jar/any Other) 2L
6. नमूने एकत्रण की तिथि / Date of Sample Collection 13/10/2020
7. विश्लेषण हेतु अनुरोध/ Analysis Indented by R.D. Mohadabadi
8. प्रयोगशाला में नमूने की प्राप्ति की तिथि / Date of Sample receipt in Laboratory 14/10/2020
9. विश्लेषण विधि / method of analysis .... APHA, AWWA, WEP, 23rd Edition, 2017

क्रम सं. / S. No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का मान/ सं. / एकाई/ इकाई Code No./Sampling Point <u>UPPCL/12/10/2020/14/10/2020</u> <u>Manjari, Vibhuti Vill</u> <u>Tangla, Raupura Dist Sambhal</u>	Detection Range
			Requirement (Acceptable limit)	Permissible Limit		
1	pH / pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation	<u>7.37</u>	02-12
2	मलमल / Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00	<u>1</u>	1-50NTU
3	हर/रंग / Colour, 2120 B Visual Comparison Method	हरा / Hazen	5.00	15.00	<u>30.0</u>	5-1000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रो/सेंटी एस/सेंटीमीटर	NS	NS	<u>/</u>	0.1-10000 $\mu$ S/cm
5	लवणकण / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	एम/सी. / mg/l	NS	NS	<u>/</u>	5.0-10000 mg/l
6	लवणकण / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	एम/सी. / mg/l	500.0	2000.0	<u>650.0</u>	5.0-10000 mg/l
7	लवणकण / Total Solids, 2540 B Total Solids dried at 103-105 °C	एम/सी. / mg/l	NS	NS	<u>/</u>	5.0-15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	एम/सी. / mg/l	200.00	600.00	<u>510.0</u>	10.0-5000 mg/l
9	कैल्शियम / Calcium, 3590 -Ca B EDTA Titrimetric Method	एम/सी. / mg/l	75.00	200.00	<u>340.0</u>	10.0-1000 mg/l
10	मैग्नीशियम / Magnesium, 3590 -Mg B Calculation Method	एम/सी. / mg/l	30.00	100.00	<u>170.0</u>	10.0-1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	एम/सी. / mg/l	NS	NS	<u>/</u>	1.0-100 mg/l
12	पोटेशियम / Potassium K, 3500-K B Flame Emission Photometric Method	एम/सी. / mg/l	NS	NS	<u>/</u>	1.0-100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4580-Cl <sup>-</sup> B Argentometric Method	एम/सी. / mg/l	250.00	1000.00	<u>/</u>	3.0-500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500-F D SPADNS Method	एम/सी. / mg/l	1.00	1.50	<u>/</u>	0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> B Turbidimetric Method	एम/सी. / mg/l	200.00	400.00	<u>/</u>	0.1-200 mg/l
16	फॉस्फेट / Phosphate as P, 4500 P D Stannous Chloride Method	एम/सी. / mg/l	NS	NS	<u>/</u>	0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	एम/सी. / mg/l	45.00	No relaxation	<u>/</u>	0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	एम/सी. / mg/l	0.50	No relaxation	<u>/</u>	0.1-50 mg/l
19	अल्कैलिनिटी / Alkalinity, 2320 B Titrimetric Method	एम/सी. / mg/l	200.00	600.00	<u>/</u>	20-5000 mg/l
20	बायोलॉजिकल ऑक्सीजन डिमांड / BOD, 3 day 20 °C (S 3025 (Part 4): 1993 Biochemical Oxygen Demand	एम/सी. / mg/l	NS	NS	<u>/</u>	1.0-1000 mg/l
21	केमिकल ऑक्सीजन डिमांड / COD, 5220 B Open Reflux Method	एम/सी. / mg/l	NS	NS	<u>/</u>	4.0-1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	0.05	No relaxation	<u>/</u>	0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	0.05	1.50	<u>/</u>	0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	0.003	No relaxation	<u>/</u>	0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	0.01	No relaxation	<u>/</u>	0.01-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	0.30	No relaxation	<u>/</u>	0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	0.02	No relaxation	<u>/</u>	0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	एम/सी. / mg/l	5.00	15.00	<u>/</u>	0.01-1000mg/l
29	टोटल कोलिफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एमपीएन/100 मील / MPN/100 ml	Nil	No relaxation	<u>0.01</u>	<1.8 MPN/100 ml & above
30	फेकल कोलिफॉर्म / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एमपीएन/100 मील / MPN/100 ml	Nil	No relaxation	<u>0.05</u>	<1.8 MPN/100 ml & above

\* These standards are subject to revision.  
\* 31. Arsenic  
अनुसंधान के अनुसार / Analyzed by Dr. P. K. Singh  
अधिकृत हस्ताक्षर / Authorized Signatory P. K. Singh  
26/11/2020

0.01 0.05 0.0008  
\* NON-NATURAL parameter  
C.R.O. Central Laboratory

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of the laboratory.  
3. The test report pertains to the sample as received in Lab.



उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड  
UTTAR PRADESH POLLUTION CONTROL BOARD

संदर्भ सं०..... के० प्र०/ 14/2020-21

दिनांक 08-12-2020

सेवा में,

क्षेत्रीय अधिकारी,  
उ०प्र०प्रदूषण नियंत्रण बोर्ड,  
मुरादाबाद।

विषय:-विश्लेषण आख्या प्रेषित किये जाने के संबंध में।

महोदय,

आपके कार्यालय द्वारा दिनांक 13.10.2020 को एकत्रित किये गये 01 जल नमूना की विश्लेषण आख्या पत्र सहित संलग्न कर प्रेषित की जा रही है।

संलग्नक-उपरोक्तानुसार।

भवदीय

इते

Leelling

(आर०के०त्यागी) 26/11/2020

मुख्य पर्यावरण अधिकारी  
केन्द्रीय प्रयोगशाला

प्रतिलिपि:-मुख्य पर्यावरण अधिकारी वृत्त- 07 को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

इते

Leelling

मुख्य पर्यावरण अधिकारी  
केन्द्रीय प्रयोगशाला

sic

Real

PR

26/11

टी.सी.-12वी, विभूति खण्ड, गोमती नगर,  
लखनऊ - 226010  
दूरभाष : 522-2720831, 2720828  
फैक्स : 0522 - 2720764, 2720676  
ई-मेल : info@uppcb.com  
वेबसाइट : www.uppcb.com  
Desktop/covering letter head/2019

T .C.-12V, Vibhuti Khand, Gomti Nagar  
Lucknow - 226010  
Phone : 0522-2720831, 2720828  
Fax : 0522 - 2720764  
Email : info@uppcb.com  
Web Site : www.uppcb.com



उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड  
UTTAR PRADESH POLLUTION CONTROL BOARD

सदस्य सं०...../क्र० प्रप०/14/2020-21

दिनांक 08-12-2020

सेवा में,

क्षेत्रीय अधिकारी,  
उ०प्र० प्रदूषण नियंत्रण बोर्ड,  
बस्ती।

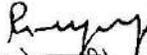
विषय:- विश्लेषण आख्या प्रेषित किये जाने के संबंध में।

महोदय,

आपके कार्यालय द्वारा दिनांक 05.11.2020 को एकत्रित किये गये 05, तथा 09.11.2020 को एकत्रित 05 जल नमूनों की विश्लेषण आख्या पत्र सहित संलग्न कर प्रेषित की जा रही है।

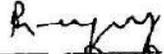
संलग्नक-उपरोक्तानुसार।

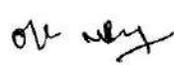
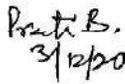
भवदीय

  
(आर०के०त्यागी)

मुख्य पर्यावरण अधिकारी  
केन्द्रीय प्रयोगशाला

प्रतिलिपि:- मुख्य पर्यावरण अधिकारी वृत्त- 06 को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

  
मुख्य पर्यावरण अधिकारी  
केन्द्रीय प्रयोगशाला

टी.सी.-12वी, विभूति खण्ड, गोमती नगर,  
लखनऊ - 226010  
दूरभाष : 522-2720831, 2720828  
फैक्स : 0522 - 2720764, 2720676  
ई-मेल : info@uppeb.com  
वेबसाइट : www.uppcb.com  
Desktop/covering/letter/heads/2015

T.C.-12V, Vibhuti Khand, Gomti Nagar  
Lucknow - 226010  
Phone : 0522-2720831, 2720828  
Fax : 0522 - 2720764  
Email : info@uppeb.com  
Web Site : www.uppcb.com





TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....

Dt. of compilation of test report ... 21/11/2020

Dt./period of testing... 6/11/2020 - 13/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुगवेल/शallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (ग्रेब/कॉम्पोजिट/इंटीग्रेटेड) / Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by Mr. Anam Kumar Srivastava (S.A.)
4. एकाग्रित नमूने का रंग एवं गंध / Colour & Odour Nil
5. एकाग्रित नमूने की मात्र एवं पैकेजिंग (प्लास्टिक जैरिकन/अन्य) / Quantity & Packing (Plastic Jerican/Any Other) 1 Lt.
6. नमूने एकत्रण की तिथि / Date of Sample Collection 5/11/20
7. विश्लेषण हेतु अनुरोध / Analysis indentified by UPPCB R.O. Bansi
8. प्रयोगशाला में नमूने प्राप्त की तिथि / Date of Sample receipt in Laboratory 6/11/2020
9. विश्लेषण विधि / method of analysis .... APHA, APWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS (10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं. / एकत्रण स्थान Code No./Sampling Point <u>UPPCB/CL/12/207/2020</u> <u>H.I. Khasra, Shakti Nagar, Prayagrah</u> <u>Kanpur, U.P. - Kanpur, Sant Kabir Nagar</u>	Detection Range
			Requirement (Acceptable limit)	Permissible Limit		
1	घ. रण/ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	गंदतापन/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हरण / Hazen	5.00	15.00		5-10000 Hazen
4	घातकता/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रॉ/सेंटी μS/cm	NS	NS		0.1 - 10000 μS/cm
5	लवणयुक्त कणिक/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिगा./सी. / mg/l	NS	NS		5.0 - 10000 mg/l
6	विघुलित कणिक/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिगा./सी. / mg/l	500.0	2000.0		5.0 - 10000 mg/l
7	दोस कणिक/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मिगा./सी. / mg/l	NS	NS		5.0 - 15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मिगा./सी. / mg/l	200.00	600.00		10.0 - 5000 mg/l
9	कैल्शियम/ Calcium, 3560 -Ca B EDTA Titrimetric Method	मिगा./सी. / mg/l	75.00	200.00		10.0 - 1000 mg/l
10	मैग्नेशियम/ Magnesium, 3500 -Mg B Calculation Method	मिगा./सी. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिगा./सी. / mg/l	NS	NS		1.0- 100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिगा./सी. / mg/l	NS	NS		1.0- 100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मिगा./सी. / mg/l	250.00	1000.00		3.0 - 500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मिगा./सी. / mg/l	1.00	1.50		0.1-1.0 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मिगा./सी. / mg/l	200.00	400.00		0.1 - 200 mg/l
16	फॉस्फेट-बी./Phosphate as P, 4500 F D Stannous Chloride Method	मिगा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिगा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिगा./सी. / mg/l	0.50	No relaxation		0.1- 50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिगा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बी.ओ.डी./ BOD, 3 day 27 °C IS 3025 ( Part 44): 1993 Biochemical Oxygen Demand	मिगा./सी. / mg/l	NS	NS		1.0 - 1000 mg/l
21	सी.ओ.डी./ COD, 5220 B Open Reflux Method	मिगा./सी. / mg/l	NS	NS		4.0 - 1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलीफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फीकल कोलीफॉर्म/ Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\*\* These standards are subject to revision.

परिष्कारण के द्वारा / Analyzed by 3/12/20

अधिकृत हस्ताक्षर / Authorized Signatory 3/12/20

\*\* Non NABL Parameter

उप पर्यवेक्षण केन्द्रिय प्रयोगशाला / C.E.O. Central Laboratory

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report... 2/12/2020

Dt./period of testing... 5/11/2020 - 12/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुबवेल/हलकाय/अन्य) Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (अन्य/संयोजित/एकीकृत) Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by... Mr. Anu Kumar Srivastava (SA)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jar/can/Any Other) 1L
6. नमूने एकत्रण की तिथि/ Date of Sample Collection... 5/11/2020
7. विश्लेषण हेतु अनुरोध/ Analysis Indented by... WPCB RO Gasti
8. प्रयोगशाला में नमूने प्राप्ति की तिथि/ Date of Sample receipt in Laboratory... 5/11/2020
9. विश्लेषण विधि/ method of analysis ... APHA, AWWA, WEF, 13rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं. / एकत्रण स्थल Code No./Sampling Point WPCB/RO/BSR/20/20 Gomti Nagar, Gasti, Lucknow Vill - Mundera, Dist - Kheri, Nagar	Detection Range
			Acceptable Limit	Permissible Limit		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	गंध/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-50NTU
3	गंध/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइक्रो सेंटीमिटर/ सीएम / $\mu S/cm$	NS	NS		0.1-10000 $\mu S/cm$
5	लवणकण/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिगा/ सी. / mg/l	NS	NS		5.0-10000 mg/l
6	दिलोयित कण/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिगा/ सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल कण/ Total Solids, 2540 B Total Solids dried at 183-105 °C	मिगा/ सी. / mg/l	NS	NS		5.0-15000 mg/l
8	हार्डनेस/ Hardness, 2540 C EDTA Titrimetric Method	मिगा/ सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मिगा/ सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मिगा/ सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिगा/ सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिगा/ सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मिगा/ सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F D SPADNS Method	मिगा/ सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500 -SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मिगा/ सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-पी/ Phosphate as P, 4500 P D Stannous Chloride Method	मिगा/ सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिगा/ सी. / mg/l	45.00	No relaxation		0.05-400 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिगा/ सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिगा/ सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बीओडी/ BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Bio chemical Oxygen Demand	मिगा/ सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सीओडी/ COD, 5220 B Open Reflux Method	मिगा/ सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा/ सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलेफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीसी/100 मि. ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलेफॉर्म / Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीसी/100 मि. ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधान/ Analyzed by... 31/12/2020

अधिकृत हस्ताक्षर/ Authorised Signatory... 31/12/2020

उप पर्यवेक्षक/ C.E.O. Central Laboratory

Note: 1 The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report ... 2/11/2020

Dt./period of testing... 6/11/2020 - 13/11/2020

- नमूने का स्रोत (ट्यूबवेल/दुग्धवेल/हलपंप/हस्तपंप/सतह जल) Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) ..... Handpump
- नमूने का प्रकार (गैर/संयोजित/संयोजित) / Type of Sample (Grab/Composite/Integrated) ..... Grab
- नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by ..... Mr. Anil Kumar Srivastava (S.A.)
- एकत्रित नमूने का रंग एवं गंध/ Colour & Odour .....
- एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jerican/Any Other) ..... 1 Lt.
- नमूने एकत्र की तिथि/ Date of Sample Collection ..... 5/11/2020
- विश्लेषण हेतु अनुरोधकर्ता/ Analysis Indented by ..... U.P.C.B. R.O. Bada
- प्रयोगशाला में नमूने एकत्र की तिथि/ Date of Sample receipt in Laboratory ..... 6/11/2020
- विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्र. सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results नमूने का संक्षेप सं. / एकत्रण स्थान Code No./Sampling Point U.P.C.B. (U) 209/203 Vill. near Muzaffarpur, Behar U.P. near Muzaffarpur, Behar Sant Kabir Nagar	Detection Range
			Required (Acceptable limit)	Permissible Limit		
1	पी.एच./pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	मिलानता/ Turbidity, 2120 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-500 NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	वाहकता/ Conductivity, 2510 B Laboratory Method	महाकांडा सांद्रता/ सी. μS/cm	NS	NS		0.1-10000 μS/cm
5	सस्पेंडेड सॉलिड्स/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड्स/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड्स/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	हार्डनेस/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नेशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मि.ग्रा./सी. / mg/l	250.00	1000.00		3.0-300 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग्रा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> B Turbidimetric Method	मि.ग्रा./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	ऑर्थो-फॉस्फेट/ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग्रा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग्रा./सी. / mg/l	45.00	No relaxation		0.03-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -N Phenate Method	मि.ग्रा./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायो-सी/ BOD, 3 day 20 °C IS 3025 (Part 4); 1993 Biochemical Oxygen Demand	मि.ग्रा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सी.ओ.डी./ COD, 5220 B Open Reflux Method	मि.ग्रा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलिफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकतट्टक/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलिफॉर्म/ Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एकतट्टक/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधानकर्ता/ Analysed by .....  
अधिकृत हस्ताक्षर/ Authorised Signatory .....

mg/l 0.01 0.05 0.00237  
\* \* Non NABL parameter

मुख्य पर्याप्त अधिकृत प्रयोगशाला/ C.E.O. Central Laboratory

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**CENTRAL LABORATORY, U.P. POLLUTION CONTROL BOARD**  
 T.C.-12 V, Vibhuti Khand, Gomti Nagar, Lucknow-226010  
 Phone: 0522-2720832, 2720480



**TEST REPORT: WATER LABORATORY (GROUND WATER)**

Certificate No. TC-6345

S.No. ....

Dt. of compilation of test report ... 2/11/2020

Dt./period of testing ... 6/11/2020 - 13/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुग्धवेल/शallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (गुह्य/संयोजित/एकीकृत) / Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by Mr. Anam Kumar Sinhasaria (CA)
4. एकत्रित नमूने का रंग एवं गंध / Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकिंग / Quantity & Packing (Plastic Jerican/Any Other) L.U.
6. नमूने एकत्र की तिथि / Date of Sample Collection 5/11/2020
7. विश्लेषण हेतु आवश्यकताएं / Analyte Indented by U.P. K. O. B. S. 6/11/2020
8. प्रयोगशाला में नमूना प्रविष्टि की तिथि / Date of Sample receipt in Laboratory
9. विश्लेषण विधि / method of analysis ... APHA, AWWA, WEF, 23rd Edition, 2017

क्र. सं. / S. No.	शैली / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का संकेत सं. / Location Code No./Sampling Point <u>Office (12/11/2020) U.P. K. O. B. S. Ghayyathnagar, Ghayyathnagar</u>	Detection Range
			Requirement (Acceptable Limit)	Permissible Limit		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	मलमल / Turbidity, 2150 B Nephelometric Method	एनपीयू / NTU	1.00	5.00		1-500 NTU
3	रंग/Colour, 2120 B Visual Comparison Method	हेज़न / Hazen	5.00	15.00		5-10000 Hazen
4	वाहकता / Conductivity, 2510 B Laboratory Method	माइक्रो वाहकता/सेमी / $\mu S/cm$	NS	NS		0.1 - 10000 $\mu S/cm$
5	सस्पेंडेड सोलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./ली. / mg/l	NS	NS		5.0 - 10000 mg/l
6	डिसॉल्वेड सोलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./ली. / mg/l	500.0	2000.0		5.0 - 10000 mg/l
7	टोटल सोलिड / Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./ली. / mg/l	NS	NS		5.0 - 15000 mg/l
8	कठोरता / Hardness, 2540 C EDTA Titrimetric Method	मि.ग./ली. / mg/l	200.00	600.00		10.0 - 5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./ली. / mg/l	75.00	200.00		10.0 - 1000 mg/l
10	मैग्नेशियम / Magnesium, 3500 -Mg B Calculatio Method	मि.ग./ली. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./ली. / mg/l	NS	NS		1.0 - 100 mg/l
12	पोटैशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./ली. / mg/l	NS	NS		1.0 - 100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500 -Cl <sup>-</sup> B Argentometric Method	मि.ग./ली. / mg/l	250.00	1000.00		3.0 - 500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500 -F <sup>-</sup> D SPADNS Method	मि.ग./ली. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500 -SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मि.ग./ली. / mg/l	200.00	400.00		0.1 - 200 mg/l
16	फॉस्फेट -पी / Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./ली. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500 -NO <sub>2</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./ली. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH3-F Phenate Method	मि.ग./ली. / mg/l	0.50	No relaxation		0.1 - 50 mg/l
19	एल्कैलिनिटी / Alkalinity, 2320 B Titrimetric Method	मि.ग./ली. / mg/l	200.00	600.00		20-5000 mg/l
20	बीओडी / BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मि.ग./ली. / mg/l	NS	NS		1.0 - 1000 mg/l
21	सीओडी / COD, 5220 B Open Reflux Method	मि.ग./ली. / mg/l	NS	NS		4.0 - 1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल फेकलीजिंग / Total Coliform, 9221 B Multiple Tube Fermentation Techniqus	एकरीजिंग/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकलीजिंग / Fecal Coliform, 9221 E Multiple Tube Fermentation Techniqus	एकरीजिंग/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

एनालिसट के द्वारा / Analysed by ... Mr. Anam Kumar Sinhasaria

अधिकृत हस्ताक्षर / Authorised Signatory ... Mr. Anam Kumar Sinhasaria

mg/l 0.01 0.05 0.00463

\* \* Non NABL Parameter

मुख्य अधिकारी/अधीनस्थ प्रमुख/ C.E.O. Central Laboratory

Note: 1 The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Certificate No. TC-6345

Dt. of completion of test report ... 21/12/2020

Dt./period of testing... 10/11/2020 - 17/11/2020

1. नमूने का स्रोत/सूत्र/चक्रवर्त संच/हस्त/ अन्य संच / Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (गैर/संयोजित/संयोजित) / Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्त का विवरण / Sample Collected by Mr. Paraghat Kumar Pandey C.I.A
4. एकत्रित नमूने का रंग एवं गंध / Colour & Odour
5. एकत्रित नमूने की मात्रा एवं पैकेजिंग / Quantity & Packing (Plastic Jerican/Any Other) 1 L
6. नमूने एकत्रण की तिथि / Date of Sample Collection 9/11/2020
7. विशलेषण हेतु आवेदनपत्र / Analysis indent by UPPCB R.O. Basti
8. प्रयोगशाला में नमूना प्राप्ति की तिथि / Date of Sample receipt in Laboratory 10/11/2020
9. विशलेषण विधि / method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	परिचय / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड सं. / एकत्रण स्थान Code No./Sampling Point <u>UPPCB/12/12/2020</u> <u>M. Paraghat Kumar Pandey</u> <u>Vill. Patana, Basti</u>	Detection Range
			संयोजित (Acceptable Limit)	परमिटेबल लिमिट		
1	पी. एच./ pH, 4500 H <sup>+</sup> B Electrometric Method	-	6.5-8.5	No relaxation		02-12
2	धूसरता / Turbidity, 2130 B Nephelometric Method	एन टीयू. / NTU	1.00	5.00		1-500NTU
3	रंग/Colour, 2120 B Visual Comparison Method	इकाई / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	माइक्रो साइमन/सेमी $\mu S/cm$	NS	NS		0.1-10000 $\mu S/cm$
5	सस्पेंडेड सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिगा./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिगा./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 B Total Solids dried at 103-105 °C	मिगा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मिगा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मिगा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नेशियम / Magnesium, 3500 -Mg B Calculation Method	मिगा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मिगा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मिगा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मिगा./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मिगा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मिगा./सी. / mg/l	200.00	400.00		0.1-300 mg/l
16	फॉस्फेट-बी / Phosphate as P, 4500 P D Stannous Chloride Method	मिगा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिगा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिगा./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	एल्केलिनिटी / Alkalinity, 2320 B Titrimetric Method	मिगा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बी.ओ.डी. / BOD, 3 day 20 °C IS 3025 ( Part 44): 1993 Biochemical Oxygen Demand	मिगा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सी.ओ.डी. / COD, 5220 B Open Reflux Method	मिगा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	प्लंब / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलीफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीयू/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलीफॉर्म / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीयू/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision. mg/l 0.01 0.05 0.00104  
 Analyzed by M.K. S. 21/12/2020  
 \*\* Non NABL Parameter

परिचालक के द्वारा / Analysed by M.K. S.  
 अधिकृत हस्ताक्षर / Authorised Signatory M.K. S.  
21/12/2020

उप पर्यवेक्षक के द्वारा / C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report ... 21/12/2020

Dt./period of testing... (01/11/2020-17/11/2020)

1. नमूने का स्रोत/क्यादाई/वहल/हैंडपंप/अन्य Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) ... Handpump
2. नमूने का प्रकार/सममिश्रित/संयोजित/ Type of Sample (Grab/Composite/Integrated) ... Grab
3. नमूने एकत्र करने वाले व्यक्ति का नाम/ Sample Collected by ... M. Parasrath Kumar Pandey (L.A.)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकेजिंग/ Quantity & Packing (Plastic Jerican/Any Other) ... 1 L
6. नमूने एकत्रण की तिथि/ Date of Sample Collection ... 01/11/2020
7. विश्लेषण हेतु आवेदनकर्ता/ Analysis Indented by ... U.P.C.B. R.O. Basti
8. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of Sample receipt in Laboratory ... 19/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का लेबल नं./ एकत्रण स्थल Code No./Sampling Point U.P.C.B. No. 8491/2020 Vibhuti Khand, Gomti Nagar, Lucknow U.P. BASTI	Detection Range
			Requirement (Acceptable Range)	Permissible Limit		
1	पी. एच/ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	गंदराज/ Turbidity, 2130 B Nephelometric Method	एन टीयू / NTU	1.00	5.00		1-500 NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइक्रो माइक्रो/सेमी μS/cm	NS	NS		0.1 -10000 μS/cm
5	सस्पेंडेड सॉलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0 -10000 mg/l
6	डिसॉल्वेड सॉलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./सी. / mg/l	500.0	2000.0		5.0 -10000 mg/l
7	टोटल सॉलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0 -15000 mg/l
8	शकता/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		10.0 -5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./सी. / mg/l	75.00	200.00		10.0 -1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग./सी. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0- 100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0- 100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मि.ग./सी. / mg/l	250.00	1000.00		3.0 - 500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग./सी. / mg/l	200.00	400.00		0.1- 200 mg/l
16	फॉस्फेट-पी/ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	आमोनिया/ Ammonia, 4500 NH <sub>3</sub> -P Phenate Method	मि.ग./सी. / mg/l	0.50	No relaxation		0.1- 50 mg/l
19	रेकेनिगिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बी.ओ.डी./ BOD, 3 day 20 °C IS 3025 ( Part 44): 1993 Bio chemical Oxygen Demand	मि.ग./सी. / mg/l	NS	NS		1.0 -1000 mg/l
21	सी.ओ.डी./ COD, 5220 B Open Reflux Method	मि.ग./सी. / mg/l	NS	NS		4.0 -1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलिफॉर्म/ Total Coliforms, 9221 B Multiple Tube Fermentation Technique	एकत्रण/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	टोटल फेसिल कोलिफॉर्म/ Faecal Coliforms, 9221 E Multiple Tube Fermentation Technique	एकत्रण/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

विश्लेषण के द्वारा/ Analysed by ...

अधिकृत हस्ताक्षर/ Authorised Signatory ...

mg/l 0.01 0.05 0.00010

\* \* Non NABL parameter

उप पर्याप्त अधिक केन्द्रीय प्रयोगशाला/ C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report ..... 21/12/2020

Dt./period of testing... 10/11/2020 - 17/11/2020

1. नमूने का स्रोत/समय/समय/समय/समय Sample Source (Tubewell/Dugwell/Shallow Pump/Sugly Water /Handpump/ any other specify) ... Handpump
2. नमूने का प्रकार (संग्रह/संग्रहित/संग्रहित) Type of Sample (Grab/Composite/Integrated) ... Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by ..... M. Parashar Kumar Landey
4. एकत्रित नमूने का रंग/ Colour & Odour .....
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jerican/Any Other) ..... 1L
6. नमूने एकत्रण की तिथि/ Date of Sample Collection ..... 9/11/2020
7. विश्लेषण हेतु आदेशकर्ता/ Analysis Indented by ..... U.P.C.S.R.O. Basti
8. प्रयोगशाला में नमूना प्रेषित की तिथि/ Date of Sample receipt in Laboratory ..... 19/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड सं. / एकत्रण स्थल Code No./Sampling Point U.P.C.S.R.O. Basti M. Parashar Kumar Landey 10/11/2020	Detection Range
			Requirement (Acceptable limit)	Permissible Limit		
1	घ. एक/ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	मलमल/ Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	घासकता/ Conductivity, 2510 B Laboratory Method	माइक्रो सान्द्रता/ संघे $\mu S/cm$	NS	NS		0.1-10000 $\mu S/cm$
5	सस्पेंडेड सॉलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./ली. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./ली. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./ली. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग./ली. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./ली. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग./ली. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./ली. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./ली. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मि.ग./ली. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग./ली. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग./ली. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-पी/ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./ली. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./ली. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -N Phenate Method	मि.ग./ली. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	एल्केलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग./ली. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल/ BOD, 3 day 27 °C IS 3025 ( Part 44): 1993 Bio chemical Oxygen Demand	मि.ग./ली. / mg/l	NS	NS		1.0-1000 mg/l
21	केमिकल/ COD, 5220 B Open Reflux Method	मि.ग./ली. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	प्लंब/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलीफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलीफॉर्म/ Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

परिष्कारण के अनुसार/ Analysed by.....

अधिकृत हस्ताक्षर/ Authorised Signatory.....

mg/l 0.01 0.05 0.00429

\*\* Non-NABL Parameter

यु. पी. सी. आर. के. सी. प्रयोगशाला/ C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report ..... 21/11/2020

Dt./period of testing... 10/11/2020 - 17/11/2020

1. नमूने का स्रोत/समूह/समय/दिनांक/स्थान/ Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (ग्रेब/कम्पोजिट/इंटीग्रेटेड) / Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Mr. Parashar Kumar Pandey (L.N)
4. रसदित नमूने का रंग एवं गंध/ Colour & Odour
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jerican/Any Other) 1 U
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 9/11/2020
7. विश्लेषण हेतु अनेकनामा/ Analysis indicated by UPCO R.O. Rasti
8. प्रयोगशाला में नमूने प्राप्त की तिथि/ Date of Sample receipt in Laboratory 10/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का संकेत सं./ एकत्रण स्थान Code No./Sampling Point <u>UPCO/12/V/12/B/2/10</u>	Detection Range <u>Nil. Upper limit 1000 mg/l</u>
			Requirement (Acceptable Limit)	For this site Limit		
1	pH / pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	विद्युतता / Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500NTU
3	रंग / Colour, 2120 B Visual Comparison Method	हेज़न / Hazen	5.00	15.00		5-1000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	मइको सइमन / सेमी $\mu$ S/cm	NS	NS		0.1 -10000 $\mu$ S/cm
5	सस्पेंडेड सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग/ली. / mg/l	NS	NS		5.0 -10000 mg/l
6	डिसॉल्वेड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग/ली. / mg/l	500.0	2000.0		5.0 -10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 B Total Solids dried at 103-105 °C	मिग/ली. / mg/l	NS	NS		5.0 -15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मिग/ली. / mg/l	200.00	600.00		10.0 -5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मिग/ली. / mg/l	75.00	200.00		10.0 -1000 mg/l
10	मैग्नीशियम / Magnesium, 3500 -Mg B Calculation Method	मिग/ली. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग/ली. / mg/l	NS	NS		1.0- 100 mg/l
12	पोटेशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मिग/ली. / mg/l	NS	NS		1.0- 100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मिग/ली. / mg/l	250.00	1000.00		3.0 - 500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मिग/ली. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मिग/ली. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-पी / Phosphate as P, 4500 P D Stannous Chloride Method	मिग/ली. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग/ली. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिग/ली. / mg/l	0.50	No relaxation		0.1- 50 mg/l
19	संकेतित्व / Alkalinity, 2320 B Titrimetric Method	मिग/ली. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोलॉजिकल / BOD, 3 day 27 °C IS 3925 ( Part 4): 1993 Bio Chemical Oxygen Demand	मिग/ली. / mg/l	NS	NS		1.0 -1000 mg/l
21	सी.ओ.डी. / COD, 5220 B Open Reflux Method	मिग/ली. / mg/l	NS	NS		4.0 -1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	प्लंब / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/ली. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलोनीज / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एमपीएन/100 पीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलोनीज / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एमपीएन/100 पीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

विश्लेषण किया गया / Analyzed by..... Prashant

अधिकृत हस्ताक्षर / Authorised Signatory Prashant

mg/l 0.01 0.05 0.00054

\* Non NABL Parameter

प्रयोगशाला के निदेशक / C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report... 21/11/2020

Dt./period of testing... 10/11/2020 - 17/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुबवेल/हलपंप/अन्य) Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Hand pump
2. नमूने का प्रकार (ग्राह/संयोजित/एकीकृत) Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by... Mr. Parasmita Kumar Pandey (L.A)
4. रंग/गंध/बूझ/रस/सुंघ/ Colour & Odour 1.0
5. एकत्रित नमूने की मात्रा एवं पैकेजिंग/ Quantity & Packing (Plastic Jerican/Any Other) 1.0
6. नमूने एकत्रण की तिथि/ Date of Sample Collection... 9/11/2020
7. विश्लेषण हेतु आवेदनकर्ता/ Analysts Identified by... U.P. Govt. Lab. East
8. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of Sample receipt in Laboratory... 10/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं./ एकत्रण स्थल Code No./Sampling Point नमूने का स्थान/ नमूने का स्रोत U.P. Govt. Lab. East Vibhuti Khand, Gomti Nagar, Lucknow	Detection Range
			Requirement (Acceptable limit)	Permissible Limit		
1	pH / pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	विलंबता / Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-500 NTU
3	रंग / Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	माइक्रो चालकता/सेमी μS/cm	NS	NS		0.1 -10000 μS/cm
5	सस्पेंडेड सोलिड्स / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./ली. / mg/l	NS	NS		5.0 -10000 mg/l
6	डिसॉल्वेड सोलिड्स / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./ली. / mg/l	500.0	2000.0		5.0 -10000 mg/l
7	टोटल सोलिड्स / Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./ली. / mg/l	NS	NS		5.0 -15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./ली. / mg/l	200.00	600.00		10.0 -5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग्रा./ली. / mg/l	75.00	200.00		10.0 -1000 mg/l
10	मैग्नेशियम / Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./ली. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./ली. / mg/l	NS	NS		1.0 -100 mg/l
12	पोटैशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./ली. / mg/l	NS	NS		1.0 -100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500- F <sup>-</sup> B Argentometric Method	मि.ग्रा./ली. / mg/l	250.00	1000.00		3.0 - 500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग्रा./ली. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग्रा./ली. / mg/l	200.00	400.00		0.1 -200 mg/l
16	फॉस्फेट-बी / Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग्रा./ली. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग्रा./ली. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -P Phenate Method	मि.ग्रा./ली. / mg/l	0.50	No relaxation		0.1 - 50 mg/l
19	एल्केलिनिटी / Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./ली. / mg/l	200.00	600.00		20-5000 mg/l
20	सांकेतिक ऑक्सीजन / BOD, 3 day 27 °C IS 3025 ( Part 44): 1993 Bio chemical Oxygen Demand	मि.ग्रा./ली. / mg/l	NS	NS		1.0 -1000 mg/l
21	सांकेतिक ऑक्सीजन / COD, 5220 B Open Reflux Method	मि.ग्रा./ली. / mg/l	NS	NS		4.0 -1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलीफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकत्रीकरण/100 पी.सी.टी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलीफॉर्म / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एकत्रीकरण/100 पी.सी.टी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.  
 \* \* 31 Arsenic mg/l 0.01 0.05 0.00051  
 \* \* Non NABL Parameter  
 Analyzed by...  
 Authorised Signatory...  
 C.E.O. Central Laboratory

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

तार : पर्यावरण  
GRAM : PARYAVARAN



उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड लखनऊ  
UTTAR PRADESH POLLUTION CONTROL BOARD LUCKNOW

क्षेत्रीय कार्यालय  
Regional Office

सन्दर्भ सं०  
Ref. No. ....

793/G.F-149/20

दिनांक 16/12/20  
Dated : .....20

सेवा में,

मुख्य पर्यावरण अधिकारी वृत्त-6,  
उ०प्र० प्रदूषण नियंत्रण बोर्ड,  
लखनऊ।

विषय:- मा०एन०जी०टी० नई दिल्ली में विचाराधीन ओ०ए० संख्या-384/2019 सुनीता पाण्डेय एवं अन्य बनाम यूनियन ऑफ इण्डिया एवं अन्य में पारित आदेश दिनांक 23/08/2019 एवं 24/08/2019 के संबंध में निरीक्षण आख्या।

महोदय,

कृपया उपरोक्त विषयक बोर्ड मुख्यालय के पत्रांक संख्या-एच०-53885/सी०-6/सा०/172/सुनीता पाण्डेय/यूनियन/20 दिनांक 08/10/2020 का संदर्भ ग्रहण करना चाहें, जिसके अनुक्रम में अवगत कराना है कि क्षेत्रीय कार्यालय, लखनऊ से आच्छादित जनपद-लखनऊ में दिनांक 09/11/2020 व जनपद-लखीमपुर खीरी में दिनांक 05/11/2020 एवं 06/11/2020 को आर्सेनिक प्रभावित हैबिटेसन गांवों के हैंडपम्पो के जल नमूने एकत्रण कराकर विश्लेषण हेतु केन्द्रीय प्रयोगशाला में जमा किया गया था। बोर्ड मुख्यालय के पत्रांक संख्या-एच-55811/के०प्रयोग/14/2020-21 दिनांक 08/12/2020 द्वारा उक्त कुल-17 हैंडपम्पो की विश्लेषण आख्या केन्द्रीय प्रयोगशाला से प्राप्त हुयी है, जिसे इस पत्र के साथ संलग्न कर आपके अवलोकनार्थ एवं अग्रिम आवश्यक कार्यवाही हेतु सादर प्रेषित है।

संलग्नक:- यथोपरि

भवदीय,

(डा० राम करन)  
क्षेत्रीय अधिकारी

प्रतिलिपि:- मुख्य पर्यावरण अधिकारी वृत्त-5, उ०प्र० प्रदूषण नियंत्रण बोर्ड, लखनऊ को सादर सूचनार्थ प्रेषित।

क्षेत्रीय अधिकारी

EC/TC  
B  
17/12



उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड  
UTTAR PRADESH POLLUTION CONTROL BOARD

108/142

संदर्भ सं०..... / के० प्रचो०/14/2020-21

दिनांक 08/12/2020

सेवा में,

✓ क्षेत्रीय अधिकारी,  
उ०प्र० प्रदूषण नियंत्रण बोर्ड,  
लखनऊ।

विषय:- विश्लेषण आख्या प्रेषित किये जाने के संबंध में।

महोदय,

आपके कार्यालय द्वारा दिनांक 05.11.2020 को एकत्रित किये गये 13, दिनांक 06.11.2020 को एकत्रित 03 तथा दिनांक 09.11.2020 को एकत्रित 01 जल नमूनों की विश्लेषण आख्या पत्र सहित संलग्न कर प्रेषित की जा रही है।

संलग्नक-उपरोक्तानुसार।

M/108/14/2020  
08/12/2020

भवदीय

(आर०के०त्यागी)

मुख्य पर्यावरण अधिकारी  
केन्द्रीय प्रयोगशाला

प्रतिलिपि:- मुख्य पर्यावरण अधिकारी वृत्त- 05 को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

मुख्य पर्यावरण अधिकारी  
केन्द्रीय प्रयोगशाला

टी.सी.-12वी, विभूति खण्ड, गौमती नगर,  
लखनऊ- 226010  
दूरभाष : 522-2720831, 2720828  
फैक्स : 0522 - 2720764, 2720676  
ई-मेल : info@uppeb.com  
वेबसाइट : www.uppcb.com  
Desktop/CoveringLetter head/2019

T .C.-12V, Vibhuti Khand, Gomti Nagar  
Lucknow - 226010  
Phone : 0522-2720831, 2720828  
Fax : 0522 - 2720764  
Email : info@uppeb.com  
Web Site : www.uppcb.com



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report ... 2/12/2020

Dt./period of testing ... 9/11/2020 - 17/11/2020

1. नमूने का स्रोत/समय/संकेत/उपकरण Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/any other specify) Handpump
2. नमूने का प्रकार (मिश्र/संयोजित/SPC226/ Type of Sample (Grab/Composite/Integrated)) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Mr. Kuldeep Patel (S.A)
4. रंग/बिना रंग के रंग/ Colour & Odour Nil
5. रकबा/नमूने की मात्रा एवं पैकेजिंग/ Quantity & Packing (Plastic/Jerican/Any Other) 1L
6. नमूने एकत्र की तिथि/ Date of Sample Collection 9/11/2020
7. विश्लेषण हेतु आवेदनकर्ता/ Analyzed Indented by Ujjwal RO Lucknow
8. आवेदनपत्र में नमूने प्राप्त की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis ... APHA, AWWA, WEF, 13rd Edition, 2017

क्रम सं./ S. No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (1 <sup>st</sup> Revision)		Results नमूने का संकेत सं./ एकत्रण स्थल Code No./Sampling Point <u>Ujjwal RO Lucknow</u> <u>Ujjwal Handpump</u> <u>Ujjwal Khand</u>	Detection Range
			Requirement (Acceptable Value)	Permissible Limit		
1	पी. एच./ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	धुंधलान/ Turbidity, 2130 B Nephelometric Method	एनटीयू. / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हेज़न / Hazen	5.00	15.00		3-1000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइको वाइसन/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	लटकेले सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	दिलीवर्ड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	हार्डनेस/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नेशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मि.ग्रा./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोरिड/ Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मि.ग्रा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> B Turbidimetric Method	मि.ग्रा./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-बी/ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग्रा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग्रा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500-NH <sub>3</sub> -F Phenate Method	मि.ग्रा./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	एल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल/ BOD, 3 day 20 °C IS 3025 ( Part 44): 1995 Bio chemical Oxygen Demand	मि.ग्रा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	क्रोमिक/ COD, 5220 B Open Reflux Method	मि.ग्रा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.C.), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलीफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.3 MPN/100 ml & above
30	फेकल कोलीफॉर्म / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.3 MPN/100 ml & above

\* These standards are subject to revision.

विश्लेषण के द्वारा/ Analyzed by Ujjwal RO Lucknow

अधिकृत हस्ताक्षरकर्ता/ Authorised Signatory Ujjwal RO Lucknow

mg/l 0.01 0.05 0.0024  
\* \* Non NABL Parameter

प्रकार के लिए प्रयोग/ C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory.  
3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....

Dt. of compilation of test report ... 2/12/2020

Dt./period of testing... 9/11/2020 - 17/11/2020

1. नमूने का स्रोत/समग्र बंद/इसके अन्य Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) ... Handpump
2. नमूने का प्रकार (गुह/संयुक्त/एकीकृत) / Types of Sample (Grab/Composite/Integrated) ... Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by ... M. K. Shrivastava Patel (S.A.)
4. एकत्रित नमूने का रंग एवं गंध / Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकेजिंग / Quantity & Packing (Plastic Jar/can/Any Other) ... 1 L
6. नमूने एकत्रण की तिथि / Date of Sample Collection ... 5/11/2020
7. विश्लेषण हेतु आवेदनकर्ता / Analysis Indented by ... Office ko Lucknow
8. प्रयोगशाला में नमूना प्राप्त की तिथि / Date of Sample receipt in Laboratory ... 9/11/2020
9. विश्लेषण विधि / method of analysis ... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	परामांश / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results नमूने का सं. सं. / परामांश सं. सं. Code No./Sampling Point U.P. Pollution Control Board T.C. 12 V, Vibhuti Khand, Gomti Nagar, Lucknow	Detection Range
			एंगेजमेंट (अविवेकित) (Engagement (As-is))	परामांशिक (Permissible Limit)		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	धुंधलापन / Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-500NTU
3	रंग / Colour, 2120 B Visual Comparison Method	इंजन / Hazon	5.00	15.00		3-1000 Hazon
4	धातुता / Conductivity, 2510 B Laboratory Method	माइक्रो साइकल/सेमी / $\mu S/cm$	NS	NS		0.1-10000 $\mu S/cm$
5	उत्प्लवक कणिका / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	ग्राम/ली. / mg/l	NS	NS		5.0-10000 mg/l
6	दिलीवृत कणिका / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	ग्राम/ली. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	कुल कणिका / Total Solids, 2540 B Total Solids dried at 103-105 °C	ग्राम/ली. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	ग्राम/ली. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	ग्राम/ली. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम / Magnesium, 3500 -Mg B Calculation Method	ग्राम/ली. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	ग्राम/ली. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम / Potassium K, 3500-K B Flame Emission Photometric Method	ग्राम/ली. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	ग्राम/ली. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	ग्राम/ली. / mg/l	1.00	1.30		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	ग्राम/ली. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-सी / Phosphate as P, 4500-P D Stannous Chloride Method	ग्राम/ली. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	ग्राम/ली. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500-NH <sub>3</sub> -F Phenate Method	ग्राम/ली. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अम्लीयता / Alkalinity, 2320 B Titrimetric Method	ग्राम/ली. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल ऑक्सीजन डिमांड / BOD, 3 day 27 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	ग्राम/ली. / mg/l	NS	NS		1.0-1000 mg/l
21	केमिकल ऑक्सीजन डिमांड / COD, 5220 B Open Reflux Method	ग्राम/ली. / mg/l	NS	NS		4.0-1000 mg/l
22	कुल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	प्लंब / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	5.00	15.00		0.01-1000 mg/l
29	कुल कोलोनि / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीयू/100 मीली / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	थर्मोटोरिक कोलोनि / Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीयू/100 मीली / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

31 Analyzed by...  
Authorized Signatory...  
Date: 2/12/2020

mg/l 0.01 0.05 0.01183  
\* \* Non NABL parameter

प्रयोगशाला के प्रमुख / C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report ... 2/12/2020

Dt./period of testing... 9/11/2020 - 17/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुग्धवेल/हस्तपंप) Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (ग्राब/संयोजित/एकीकृत) Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by Makshitesh Patel (SN)
4. रसायन नमूने का रंग एवं गंध / Colour & Odour 14
5. प्रत्येक नमूने की मात्रा एवं पैकिंग / Quantity & Packing (Plastic Jar/can/Any Other) 14
6. नमूने एकत्रण की तिथि / Date of Sample Collection 17/11/2020
7. विश्लेषण हेतु आवेदनपत्र / Analysis Indented by UPCLB RO Lucknow
8. प्रयोगशाला में नमूना प्राप्ति की तिथि / Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि / method of analysis .... APHA, AWWA, WEP, 23rd Edition, 2017

क्र.सं. / S.No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का स्रोत / एकत्रण स्थान Code No./Sampling Point <u>UPCLB/CA/12/20/02</u> <u>L.M.H.P. V.II - Sipsal Kherwa</u> <u>Lakshimpur School</u>	Detection Range
			Requirement (Acceptable Limit)	Permissible Limit		
1	पी.एच./pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	पर्यटन / Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-50 NTU
3	रंग / Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-1000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	माइक्रो सेंटीम्यूड/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	सस्पेंडेड सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./ली. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./ली. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./ली. / mg/l	NS	NS		5.0-35000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मि.ग./ली. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम / Calcium, 2560 -Ca B EDTA Titrimetric Method	मि.ग./ली. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम / Magnesium, 3500 -Mg B Calculation Method	मि.ग./ली. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./ली. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./ली. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4509-Cl <sup>-</sup> B Argentometric Method	मि.ग./ली. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4508- F <sup>-</sup> D SPADNS Method	मि.ग./ली. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500- SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग./ली. / mg/l	200.00	400.00		0.1-300 mg/l
16	फॉस्फेट-ए / Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./ली. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./ली. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मि.ग./ली. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी / Alkalinity, 2320 B Titrimetric Method	मि.ग./ली. / mg/l	200.00	600.00		20-5000 mg/l
20	बायो.डी. / BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Bio Chemical Oxygen Demand	मि.ग./ली. / mg/l	NS	NS		1.0-1000 mg/l
21	सी.डी.डी. / COD, 5220 B Open Reflux Method	मि.ग./ली. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./ली. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलिफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीयू/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलिफॉर्म / Fecal Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीयू/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.  
3) Arsenic mg/l 0.01 0.05 0.00487

परिष्कारण / Analyzed by M.K. Singh \*\* Non NABL Parameter  
अधिकृत हस्ताक्षर / Authorized Signatory [Signature]

उपरोक्त लैबोरेटरी के अध्यक्ष / C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory.  
3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report ... 2/12/2020

Certificate No. TC-6345  
Dt./period of testing... 9/11/2020-17/11/2020

1. नमूने का स्रोत/समय/समय/दिनांक/ Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/any other specify) Hand pump
2. नमूने का प्रकार/संग्रह/संग्रह/संग्रह/ Type of Sample (Grab/Composite/Integrated)
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Mr. Kshitish Patel (SA)
4. एकत्रित नमूने का रंग/सुंघ/ Colour & Odour
5. एकत्रित नमूने की मात्रा/ पैकेजिंग/ Quantity & Packing (Plastic Jar/Can/Any Other) 1 Ltr
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 5/11/2020
7. विश्लेषण हेतु आदेश/ Analysis Indented by Officer S.O. Lucknow
8. विश्लेषण में प्रयुक्त विधि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WER, 23rd Edition, 2017

क्रम श्री / S. No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं./ एकत्रण स्थल Code No./Sampling Point <u>UP/12/10/17/2020</u> <u>S.O. Lucknow</u> <u>Lakhimpur Kheri</u>	Detection Range
			(Recommended Acceptable Limit)	Permissible Limit		
1	पी.एच./pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	धुंधलापन/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500NTU
3	रंग/Colour, 2120 B Visual Comparison Method	इंजन / Hazen	5.00	15.00		5-10000 Hazen
4	वाहकत्व/ Conductivity, 2510 B Laboratory Method	माइक्रो सेंटरन/सेटी $\mu$ S/cm	NS	NS		0.1-10000 $\mu$ S/cm
5	सस्पेंडेड सॉलिड्स/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड्स/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग/सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड्स/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-15000 mg/l
8	हार्डनेस/ Hardness, 2540 C EDTA Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		10.0-3000 mg/l
9	कैल्शियम/ Calcium, 2590 -Ca B EDTA Titrimetric Method	मिग/सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मिग/सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मिग/सी. / mg/l	250.00	1000.00		5.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मिग/सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500-SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मिग/सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट/ Phosphate as P, 4500 P D Stannous Chloride Method	मिग/सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग/सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिग/सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायो लॉजिकल/ BOD, 3 day 27 °C IS 3025 (Part 4): 1993 Bio chemical Oxygen Demand	मिग/सी. / mg/l	NS	NS		1.0-1000 mg/l
21	क्रोमियम/ COD, 5220 B Open Reflux Method	मिग/सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोल्फॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 मि.सी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोल्फॉर्म/ Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 मि.सी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधान के द्वारा/ Analyzed by M. Kshitish Patel

अधिकृत हस्ताक्षर/ Authorised Signatory S. O. Lucknow

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of Laboratory.  
3. The test report pertains to the sample as received in Lab.





TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report ... 2/11/2020

DL/period of testing... 9/11/2020 ~ 17/11/2020

Certificate No. TC-6345

- नमूने का स्रोत/समझ/समझ/समझ Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
- नमूने का प्रकार (संग्रह/संग्रह/संग्रह) / Type of Sample (Grab/Composite/Integrated) ... Grab
- नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by ... Mr. Anam Kumar Srivastava (S.A)
- रकबा नमूने का रंग एवं गंध/ Colour & Odour ... Nil
- रकबा नमूने की मात्रा एवं पैकेजिंग/ Quantity & Packing (Plastic Jerican/Any Other) ... 1L
- नमूने एकत्र की तिथि/ Date of Sample Collection ... 5/11/2020
- विश्लेषण हेतु आदेशनामा/ Analysis Indented by ... Dr. R. O. Luchan
- प्रयोगशाला में नमूने की तिथि/ Date of Sample receipt in Laboratory ... 9/11/2020
- विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	परामीटर / Parameter	यूनिट / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results नमूने का संकेत सं. / एकत्रण स्थल Code No./Sampling Point <u>UPPCL/12V/23/2020</u> <u>Shri. Anam Kumar Srivastava</u> <u>Mr. Luchan</u> <u>Lucknow</u>	Detection Range
			Requirement (Acceptable limit)	Permissible Limit		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	गंदगी/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-50NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-1000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	महासे चालकता/सेमी μS/cm	NS	NS		0.1 -1000 μS/cm
5	लवण-युक्त कणिकाएँ / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-10000 mg/l
6	दिलोयन कणिकाएँ / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग/सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल कणिकाएँ / Total Solids, 2540 B Total Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मिग/सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculetion Method	मिग/सी. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मिग/सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मिग/सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मिग/सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	ऑर्थो-ऑर्थो-फॉस्फेट/ Phosphate as P, 4500 P D Stannous Chloride Method	मिग/सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग/सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिग/सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायो-ऑक्सीजन/ BOD, 3 day 27 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मिग/सी. / mg/l	NS	NS		1.0-1000 mg/l
21	केमिकल ऑक्सीजन/ COD, 5220 B Open Reflux Method	मिग/सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलोनिज/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 पीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलोनिज/ Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 पीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

परिष्कारण के द्वारा/ Analyzed by ...

अधिकृत हस्ताक्षर/ Authorised Signatory ...

mg/l 0.01 0.05  
 \*\* Non NABL Parameter  
 NB → Not detected

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

DL of compilation of test report ... 2/11/2020

Certificate No. TC-6345

DL/period of testing... 9/11/2020 - 17/11/2020

1. नमूने का स्रोत/समग्र/समग्र/सत/दिव्य/अन्य Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specity) Handpump
2. नमूने का प्रकार (सम/संयोजित/संयोजित/संयोजित/संयोजित) Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by MA. Kshitesh Patel (SA)
4. एकत्रित नमूने का रंग/रस/गंध/ Colour & Odour
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jerkan/Any Other) 1 Lt
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 2/11/2020
7. विश्लेषण हेतु अनुरोध/ Analysis Indented by U.P. RO Lucknow
8. प्रयोगशाला में नमूने प्राप्त की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis ... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	परामितर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results नमूने का संकेत सं./ एकत्रण स्थल Code No./Sampling Point एकत्रण स्थल U.P. RO Lucknow T.C. 12 V - Vibhuti Khand Gomti Nagar, Lucknow	Detection Range
			Requirement (In-situ/point) (Unit)	Permissible Limit		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	परिलम्बन/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	होन / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइको सिकम/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	सस्पेंडेड सॉलिड्स/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड्स/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग/सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड्स/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		0.0-5000 mg/l
9	कैल्शियम/ Calcium, 3560 -Ca B EDTA Titrimetric Method	मिग/सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नेशियम/ Magnesium, 3560 -Mg B Calculation Method	मिग/सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मिग/सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मिग/सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मिग/सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट/ Phosphate as P, 4500 P D Stannous Chloride Method	मिग/सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग/सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -N Phenate Method	मिग/सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल/ BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मिग/सी. / mg/l	NS	NS		1.0-1000 mg/l
21	क्रोमिक/ COD, 5220 B Open Reflux Method	मिग/सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलिफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकफिल्ट्रेशन/ 100 पीसीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फोकल कोलिफॉर्म/ Focal Coliform, 9221 B Multiple Tube Fermentation Technique	एकफिल्ट्रेशन/ 100 पीसीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधान/ Analyzed by... SA

अधिकृत हस्ताक्षर/ Authorised Signatory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. .... Certificate No. TC-6345  
Dt. of compilation of test report 2/12/2020 Dt./period of testing... 9/11/2020 - 17/11/2020

1. नमूने का स्रोत/समय/समय/स्थान Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Kandhumb
2. नमूने का प्रकार (गैर/संयोजित/एकीकृत) / Type of Sample (Grab/Composite/Integrated) G.S.S.
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Mr. Kishor Patel (S.A.)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour .....
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jar/can/Any Other) 1 Lt
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 5/11/2020
7. विश्लेषण हेतु आदेशनामा/ Analysis Indented by UPES Ro Lucknow
8. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis .... APEA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं./ एकत्रण स्थल Code No./Sampling Point <u>UPES Ro Lucknow</u> <u>T.M.H.P. Viji Mahadev</u> <u>Kandhumb, Kanpur</u>	Detection Range
			Requirement (Acceptable limit)	Permissible Limit		
1	घ. दू. / pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	गंदगी/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500 NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	इकाई / Hazen	5.00	15.00		5-10000 Hazen
4	वाहकता/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रन/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	सस्पेंडेड सॉलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2348 C EDTA Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग./सी. / mg/l	30.00	100.00		10.0- 1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मि.ग./सी. / mg/l	250.00	1000.00		3.0- 500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-बी/ Phosphate as P, 4500 F D Stannous Chloride Method	मि.ग./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -N Phenate Method	मि.ग./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बी.ओ.डी./ BOD, 5 day 20 °C IS 3025 ( Part 4): 1993 Bio chemical Oxygen Demand	मि.ग./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सी.ओ.डी./ COD, 5220 B Open Reflux Method	मि.ग./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	जिंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कॉलिफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकवीएफए/100 पी सी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कॉलिफॉर्म/ Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एकवीएफए/ 100 पी सी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधानकर्ता के द्वारा/ Analyzed by M. Kishor Patel  
अधिकृत हस्ताक्षर/ Authorized Signatory M. Kishor Patel  
3/12/20

mg/l 0.01 0.05 NS  
\* \* Non NABL Parameter  
NS = Not detected

Rajendra

Note: 1 The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory.  
3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report... 2/11/2020

Certificate No. TC-6345  
Dt./period of testing... 9/11/2020 - 17/11/2020

1. स्रोत का नाम/सूत्र/सहाई बोर/हस्तपंप अन्य Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) ... Handpump
2. स्रोत का प्रकार (संग्रह/संयोजित/एकीकृत) / Type of Sample (Grab/Composite/Integrated) ... Grab
3. स्रोत एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by ... Mukhiteshwar Singh
4. रसायन स्रोत का रंग एवं गंध / Colour & Odour ...
5. रसायन स्रोत की मात्रा एवं पैकेजिंग (प्लास्टिक जरि/अन्य) / Quantity & Packing (Plastic Jar/can/Any Other) ... 1 L
6. स्रोत एकत्र की तिथि / Date of Sample Collection ... 2/11/2020
7. विश्लेषण हेतु आदेशकर्ता / Analysts Indented by ... V.P.S. Singh
8. प्रयोगशाला में प्रयुक्त स्रोत की तिथि / Date of Sample receipt in Laboratory ... 9/11/2020
9. विश्लेषण विधि / method of analysis ... AFHA, AWWA, WEP, 23rd Edition, 2017

क्रम सं. / S. No.	पारामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS (10500:2012 (2 <sup>nd</sup> Revision)		Results स्रोत का कोड सं. / एकत्रण स्थल Code No./Sampling Point <u>V.P.S. Singh</u> <u>Handpump</u> <u>Lucknow</u>	Detection Range
			Requirement (संयोजित/Grab)	Permissible Limit		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	गंदगी / Turbidity, 2130 B Nephelometric Method	एन.टीयू. / NTU	1.00	5.00		1-500NTU
3	रंग/Colour, 2120 B Visual Comparison Method	इकाई / Hazen	5.00	15.00		5-1000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	माइक्रो सिल्लर/सेंटी / $\mu S/cm$	NS	NS		0.1 -10000 $\mu S/cm$
5	सस्पेंडेड सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0 -10000 mg/l
6	डिसॉल्वेड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./सी. / mg/l	500.0	2000.0		5.0 -10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0 -15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		10.0 -5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./सी. / mg/l	75.00	200.00		10.0 -1000 mg/l
10	मैग्नेशियम / Magnesium, 3500 -Mg B Coloration Method	मि.ग./सी. / mg/l	30.00	100.00		10.0 - 1000 mg/l
11	सोडियम / Sodium Na, 3500 -Na B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0- 100 mg/l
12	पोटेशियम / Potassium K, 3590-K B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0- 100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500 -Cl <sup>-</sup> B Argentometric Method	मि.ग./सी. / mg/l	250.00	1000.00		3.0 - 500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500 -F <sup>-</sup> D SPADNS Method	मि.ग./सी. / mg/l	1.00	1.50		0.1-19 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग./सी. / mg/l	200.00	400.00		0.1 -200 mg/l
16	फॉस्फेट / Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500 -NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मि.ग./सी. / mg/l	0.50	No relaxation		0.1-30 mg/l
19	अल्कैलिनिटी / Alkalinity, 2320 B Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल ऑक्सीजन डिमांड / BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मि.ग./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	क्रोमिक ऑक्सीजन डिमांड / COD, 5120 B Open Reflux Method	मि.ग./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लीड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.01	No relaxation		0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलोनिज / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फोकल कोलोनिज / Focal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

एनालिसिस किया / Analyzed by... M.S. Singh  
अधिकृत हस्ताक्षर / Authorized Signatory... M.S. Singh  
2/11/20

mg/l 0.01 0.05 0.00944  
\* Non NABL parameter

प्रकार अधिकारी / C.E.O. Central Laboratory  
Rajendra

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CENTRAL LABORATORY, U.P. POLLUTION CONTROL BOARD  
T.C.-12 V, Vibhuti Khand, Gomti Nagar, Lucknow-226010  
Phone: 0522-2720832, 2720480



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....  
Dt. of compilation of test report... 2/12/2020

Certificate No. TC-6345  
Dt./period of testing... 9/11/2020-17/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुग्धवेल/शallow Pump/Supply Water /Handpump/ any other specify) Handpump
2. नमूने का प्रकार (ग्रेब/कॉम्पोजिट/इंटीग्रेटेड) / Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by... M. K. Shikesh Patel (CSA)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकिंग (Plastic Jar/can/Any Other) LIT
6. नमूने एकत्रण की तिथि/ Date of Sample Collection... 5/11/2020
7. विश्लेषण हेतु आदेशकर्ता, / Analysts indicated by... UPPCA Lucknow
8. प्रयोगशाला में नमूने प्राप्त की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं./ S. No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results नमूने का कोड नं./ एकत्रण स्थल Code No./Sampling Point UPPCA/12/1828/2020 T.M.V.C. N-1-K. K. Khand Lakhimpur Khari	Detection Range
			अवश्या (Acceptable Limit)	परिहार्य सीमा (Permissible Limit)		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	मलमल/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-1000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइक्रो सल्फ/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	सस्पेंडेड सॉलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग्रा./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग्रा./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मिग्रा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	हार्डनेस/ Hardness, 2540 C EDTA Titrimetric Method	मिग्रा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मिग्रा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Colorimetric Method	मिग्रा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मिग्रा./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोरोइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मिग्रा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500 -SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मिग्रा./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट/ Phosphate as P, 4500 P D Stannous Chloride Method	मिग्रा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग्रा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenato Method	मिग्रा./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिटी/ Alkalinity, 2320 B Titrimetric Method	मिग्रा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बी.ओ.डी./ BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मिग्रा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	केमिकल/ COD, 5220 B Open Reflux Method	मिग्रा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग्रा./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कॉलिफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीयू/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कॉलिफॉर्म/ Fecal Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीयू/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

एनालिसट/ Analyzed by...  
अधिकृत हस्ताक्षर/ Authorized Signatory...

mg/l 0.01 0.05 0.01009  
\* \* Non NABL Parameter

Note: 1 The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory.  
3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dr. of compilation of test report 2/12/2020

Certificate No. TC-6345

Dr./period of testing... 9/11/2020 - 17/11/2020

1. नमूने का स्रोत/समकाल/सफाई सार/सिंचन/ Sample Source (Tabewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (संगठित/असंगठित/संयोजित) / Type of Sample (Crab/Composite/Integrated) Crab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण / Sample Collected by Mr. Keshav Patel (SA)
4. रंग/गंध/सुंघने योग्य/ Colour & Odour
5. पैकेजिंग नमूने की मात्रा एवं पैकेजिंग / Quantity & Packing (Plastic Jerican/Any Other) 1L
6. नमूने एकत्रण की तिथि / Date of Sample Collection 5/11/2020
7. विश्लेषण हेतु अनुरोधनामा / Analyza Indented by UPPCB RO Lucknow
8. प्रयोगशाला में नमूने प्राप्त की तिथि / Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि / method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्र. सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड सं. / एकत्रण स्थल Code No./Sampling Point <u>UPCCB/RO/10/829/2020</u> <u>UPCCB RO - Lucknow</u>	Detection Range
			Requirement (permissible limit)	Permissible Limit		
1	दि. दृ. pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	धुंधलापन / Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-500NTU
3	रंग/Colour, 2120 B Visual Comparison Method	हेज़न / Hazen	5.00	15.00		5-10000 Hazen
4	वाहकता/ Conductivity, 2510 B Laboratory Method	माइक्रो वाहकता/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	सस्पेंडेड सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 102-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 B Total Solids dried at 102-105 °C	मि.ग./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/Magnesium, 3500 -Mg B Calculation Method	मि.ग./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम/Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मि.ग./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मि.ग./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-P/Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -P Phenatic Method	मि.ग./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी / Alkalinity, 2320 B Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00		20-3000 mg/l
20	बायो लॉजिकल / BOD, 3 day 20°C IS 3025 (Part 4): 1993 Bio chemical Oxygen Demand	मि.ग./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	क्रोमिक ऑक्साइड / COD, 5220 B Open Reflux Method	मि.ग./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.30	No relaxation		0.25-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलोनिज / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 पीसीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलोनिज / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 पीसीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधान के प्रकार / Analysed by.....

अधिकृत हस्ताक्षरकर्ता / Authorised Signatory.....

\*\* Non NABL parameter

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory.  
3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....  
Dt. of completion of test report... 9/11/2020 Dt./period of testing... 9/11/2020 - 17/11/2020 Certificate No. TC-6345

1. नमूने का स्रोत/समझ/समझ/समझ/समझ Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (गुप्त/संयोजित/संयोजित) Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by... Mr. Kshitish Patel (SA)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jar/can/Any Other) 1 Lt
6. नमूने एकत्रण की तिथि/ Date of Sample Collection... 5/11/2020
7. विश्लेषण हेतु आवेदनकर्ता/ Analysis Indented by... U.P. Govt. Lab. Lucknow
8. प्रयोगशाला में नमूने प्राप्त की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis ... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं./ एकत्रण स्थल Code No./Sampling Point <u>U.P. Govt. Lab. Lucknow</u> <u>9/11/2020</u> <u>Handpump</u> <u>Kandhara, Gomti Nagar, Lucknow</u>	Detection Range
			Permissible Limit (Acceptable Max)	Permissible Limit		
1	घ. एच./ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	धुंधलापन/ Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-50NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	इकाई / Hazen	5.00	15.00		5-10000 Hazen
4	चुम्बकत्व/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रॉन/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	जल-अवशेष कणिकाएं/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	विघुलित कणिकाएं/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	कुल कणिकाएं/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मि.ग्रा./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मि.ग्रा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग्रा./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-सी./ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग्रा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग्रा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -N Phenate Method	मि.ग्रा./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल/ BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मि.ग्रा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	क्रोमियम/ COD, 5220 B Open Reflux Method	मि.ग्रा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	सीसा/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल कोलिफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 पीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फैकल कोलिफॉर्म/ Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 पीसी / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.  
21  
Analyzed by... Mr. Kshitish Patel 9/11/2020  
mg/l 0.01 0.05 0.00482  
\*\* Non NABL parameter

अधिकृत हस्ताक्षर/ Authorized Signature... [Signature]  
31/11/20

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report... 2/11/2020

Dt./period of testing... 9/11/2020 - 17/11/2020

Certificate No. TC-6345

1. स्रोत का नाम/सूत्र/सतही सतह/दुबले सतह/ Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. स्रोत का प्रकार (गिर/समाहित/एकीकृत) / Type of Sample (Grab/Composite/Integrated) Grab
3. स्रोत सतह करने वाले व्यक्ति का विवरण/ Sample Collected by Mr. Kshiteh Patel (JA)
4. एकत्रित स्रोत का रंग एवं गंध/ Colour & Odour
5. एकत्रित स्रोत की मात्रा एवं पैकेजिंग (प्लास्टिक जरि/अन्य) / Quantity & Packing (Plastic Jerican/Any Other) 1 L
6. स्रोत एकत्रण की तिथि/ Date of Sample Collection 9/11/2020
7. विश्लेषण हेतु आदेशकर्ता/ Analysts Indented by UPCL P.O. Lucknow
8. प्रयोगशाला में प्राप्त प्राप्ति की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि/ method of analysis APHA, AWWA, WRF, 23rd Edition, 2017

क्रम सं. / S. No.	परामित / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results स्रोत का संकेत सं./ एकत्रण स्थान Code No./Sampling Point <u>W/10/CL/10/2/21/2020</u> <u>Handpump, Gomti Nagar, Lucknow</u>	Detection Range
			अव्युत्पन्न (Acceptable Limit)	परिहार्य सीमा		
1	pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	मलमल / Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500 NTU
3	रंग/ Colour, 3120 B Visual Comparison Method	इयन / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता / Conductivity, 2510 B Laboratory Method	माइक्रो सतह/सेमी $\mu S/cm$	NS	NS		0.1-10000 $\mu S/cm$
5	सस्पेंडेड सॉलिड / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग/सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड / Total Solids, 2540 D Total Solids dried at 103-105 °C	मिग/सी. / mg/l	NS	NS		5.0-15000 mg/l
8	हार्डनेस / Hardness, 2340 C EDTA Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम / Calcium, 3800 -Ca B EDTA Titrimetric Method	मिग/सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नेशियम / Magnesium, 3800 -Mg B Calculation Method	मिग/सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मिग/सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मिग/सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500-F <sup>-</sup> D SPADNS Method	मिग/सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मिग/सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट / Phosphate as P, 4500 P D Stannous Chloride Method	मिग/सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग/सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -N Phenate Method	मिग/सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	अभिलक्षिता / Alkalinity, 2320 B Titrimetric Method	मिग/सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बी.ओ.डी. / BOD, 3 day 20 °C IS 3025 ( Part 44): 1993 Bio chemical Oxygen Demand	मिग/सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सी.ओ.डी. / COD, 5220 B Open Reflux Method	मिग/सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.01	No relaxation		0.00-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग/सी. / mg/l	5.00	15.00		0.01-1000 mg/l
29	टोटल फेकल कॉलॉन / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एक मिलीग्राम / 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फोकल कॉलॉन / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एक मिलीग्राम / 100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.

एनालिसिस / Analyzed by... M. K. Singh

अधिकृत हस्ताक्षर / Authorized Signatory M. K. Singh

0.01 0.05 0.00419  
\*\* Non NABL Parameter

Note: 1 The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory; 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....  
Dt. of compilation of test report ... 2/12/2020

Certificate No. TC-6345  
Dt./period of testing... 9/11/2020-17/11/2020

1. नमूने का स्रोत/समय/समय/स्थान Sample Source (TubeWell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (संग्रह/संयोजित/संचित) Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by... Ma. Kshitesh Patel (SA)
4. नमूने का रंग एवं गंध / Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकिंग / Quantity & Packing (Plastic Jarcan/Any Other) 1 L
6. नमूने एकत्र की तिथि / Date of Sample Collection... 6/11/2020
7. विश्लेषण हेतु अनुरोध/ Analysis Indented by... U.P. R.O. Lucknow
8. प्रयोगशाला में नमूने प्राप्त की तिथि / Date of Sample receipt in Laboratory 9/11/2020
9. विश्लेषण विधि / method of analysis .... APHA, AWWA, WEP, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2nd Revision)		Results नमूने का संकेत सं. / एकत्रण स्थान Code No./Sampling Point U.P. R.O. No. - Kaimhara Lakshmanpur Kheri	Detection Range
			Requirement (Acceptable Limit)	Permissibility Limit		
1	pH, 4500 H+ B Electrometric Method		6.5-8.5	No relaxation		02-12
2	धूसरता/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500 NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रॉ/सेमी μS/cm	NS	NS		0.1 -10000 μS/cm
5	सस्पेंडेड सोलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0 -10000 mg/l
6	डिसॉल्वेड सोलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./सी. / mg/l	500.0	2000.0		5.0 -10000 mg/l
7	टोटल सोलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Cs B EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नेशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl-, 4500- Cl- B Argentometric Method	मि.ग्रा./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F-, 4500- F- D SPADNS Method	मि.ग्रा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO4-2, 4500 -SO4-2 E Turbidimetric Method	मि.ग्रा./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-पी/ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग्रा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO3- B Ultraviolet Spectrophotometric Method	मि.ग्रा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH3-F Phenate Method	मि.ग्रा./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	एल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बीओडी/ BOD, 3 day 20 °C IS 3025 ( Part 4): 1993 Biochemical Oxygen Demand	मि.ग्रा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सीओडी/ COD, 5220 B Open Reflux Method	मि.ग्रा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	प्लंब/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल फैकलीज/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	संक्राणित/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फैकलीज/ Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	संक्राणित/100 मि.ली. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* \* \* These standards are subject to revision.  
 विश्लेषण/ Analyzed by... 31/10/20  
 अधिकृत हस्ताक्षर/ Authorised Signatory... 31/10/20  
 \*\* Non NABL Parameter

Note: 1 The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced-except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report ... 24/11/2020

Certificate No. TC-6345  
Dt./period of testing... 9/11/2020 - 17/11/2020

- नमूने का स्रोत (ट्यूबवेल/सतह से नहर/झरने अन्य) Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/any other source) Handpump
- नमूने का प्रकार (संग्रह/संयोजित/संयोजित) Type of Sample (Grab/Composite/Integrated)
- नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Mr. Keshu Khatwal (CA)
- रंग/रस नमूने का रंग एवं गंध/ Colour & Odour
- प्लास्टिक नमूने की मात्रा एवं पैकेजिंग/ Quantity & Packing (Plastic Jerican/Any Other) 1.4
- नमूने एकत्रण की तिथि/ Date of Sample Collection 6/11/2020
- विश्लेषण हेतु आवेदनकर्ता/ Analysis Indented by UPPCB K.O. Lucknow
- प्रयोगशाला में नमूने प्रविष्टि की तिथि/ Date of Sample receipt in Laboratory 9/11/2020
- विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S.No.	परामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (1 <sup>st</sup> Revision)		Results नमूने का रंग एवं/संख्या एवं Code No./Sampling Point <u>UPPCB/12/V/12/23/2020</u> <u>J.M.H.P. VII - New, Gyan Lalohi, Muzila Okheri</u>	Defection Range
			Required (Acceptable Limit)	Permissible Limit		
1	pH, 4500 H B Electrometric Method		6.5-8.5	No relaxation		02-13
2	मदुनता/ Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00		5-10000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रॉ/सेमी μS/cm	NS	NS		0.1-10000 μS/cm
5	विलंबित कणिका/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिगा./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	विलेय कणिका/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिगा./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	कुल कणिका/ Total Solids, 2540 E Total Solids dried at 103-105 °C	मिगा./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2540 C EDTA Titrimetric Method	मिगा./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3590 -Ca B EDTA Titrimetric Method	मिगा./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3590 -Mg B Calculation Method	मिगा./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिगा./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिगा./सी. / mg/l	NS	NS		1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500-Cl <sup>-</sup> B Argentometric Method	मिगा./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500-F D SPADNS Method	मिगा./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500-SO <sub>4</sub> <sup>2-</sup> B Turbidimetric Method	मिगा./सी. / mg/l	200.00	400.00		0.1-200 mg/l
16	फॉस्फेट-बी/ Phosphate as P, 4500 P D Stannous Chloride Method	मिगा./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500-NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिगा./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिगा./सी. / mg/l	0.50	No relaxation		0.1-30 mg/l
19	एल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिगा./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोकेमिकल/ BOD, 3 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मिगा./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	ऑक्सीजन/ COD, 5220 B Open Reflux Method	मिगा./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	कुल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कोडोनियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिगा./सी. / mg/l	5.00	15.00		0.01-1000mg/l
29	कुल कोलिफॉर्म/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एककोलिफॉर्म/100 पीसी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलिफॉर्म/ Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एककोलिफॉर्म/100 पीसी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to change.

परिष्कारण/ Analyzed by... 24/11/2020

अधिकृत हस्ताक्षर/ Authorised Signatory... 31/11/2020

0.01 0.05 NA  
\*\* Non NABL Parameter  
NA => not detected

उपरोक्त अधिष्ठाता/ C.E.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....  
Dt. of compilation of test report ... 2/12/2020

Certificate No. TC-6345  
Dt./period of testing... 10/11/2020 - 17/11/2020

1. नमूने का स्रोत (ट्यूबवेल/दुग्धवेल/शallow Pump/Supply Water/Handpump/any other specify) Handpump
2. नमूने का प्रकार (ग्राब/कॉम्पोजिट/इंटीग्रेटिव) Type of Sample (Grab/Composite/Integrative) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by... Mr. Keshav Patel (SA)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकेजिंग/ Quantity & Packing (Plastic Jar/can/Any Other) Lit
6. नमूने एकत्रण की तिथि/ Date of Sample Collection... 9/11/2020
7. विश्लेषण हेतु आदेशकर्ता/ Analysis Indented by... Office R.O. Lucknow
8. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of Sample receipt in Laboratory 19/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 13rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं./ एकत्रण स्थल Code No./Sampling Point M.P.E. Vill-Kasooher Akulher Malhabad Lucknow	Detection Range
			Required (Acceptable Limit)	Permissible Limit		
1	पी. एच./ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation		02-12
2	संक्षालन/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00		1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हेचन / Hazen	5.00	15.00		5-10000 Hazen
4	वाहकता/ Conductivity, 2510 B Laboratory Method	माइक्रो सारघन/सेमी $\mu S/cm$	NS	NS		0.1-10000 $\mu S/cm$
5	सस्पेंडेड सॉलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मिग./सी. / mg/l	NS	NS		5.0-10000 mg/l
6	डिसॉल्वेड सॉलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मिग./सी. / mg/l	500.0	2000.0		5.0-10000 mg/l
7	टोटल सॉलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मिग./सी. / mg/l	NS	NS		5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मिग./सी. / mg/l	200.00	600.00		10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मिग./सी. / mg/l	75.00	200.00		10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मिग./सी. / mg/l	30.00	100.00		10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मिग./सी. / mg/l	NS	NS		1.0-100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मिग./सी. / mg/l	NS	NS		1.0-100 mg/l
13	सिल्वर/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मिग./सी. / mg/l	250.00	1000.00		3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मिग./सी. / mg/l	1.00	1.50		0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500 -SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मिग./सी. / mg/l	200.00	400.00		0.1-260 mg/l
16	फॉस्फेट-सी/ Phosphate as P, 4500 P D Stannous Chloride Method	मिग./सी. / mg/l	NS	NS		0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मिग./सी. / mg/l	45.00	No relaxation		0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मिग./सी. / mg/l	0.50	No relaxation		0.1-50 mg/l
19	एल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मिग./सी. / mg/l	200.00	600.00		20-5000 mg/l
20	बायोलॉजिकल/ BOD, 3 day 20°C IS 3028 ( Part 44): 1993 Bio chemical Oxygen Demand	मिग./सी. / mg/l	NS	NS		1.0-1000 mg/l
21	सेफ्टी/ COD, 5120 B Open Reflux Method	मिग./सी. / mg/l	NS	NS		4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	0.05	No relaxation		0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	0.05	1.50		0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	0.003	No relaxation		0.01-1000 mg/l
25	लेड /Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	0.01	No relaxation		0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	0.30	No relaxation		0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	0.02	No relaxation		0.04-1000 mg/l
28	ज़िंक /Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मिग./सी. / mg/l	5.00	15.00		0.01-1000mg/l
29	टोटल कोलोनिज / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 मि.सी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above
30	फेकल कोलोनिज / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 मि.सी. / MPN/100 ml	Nil	No relaxation		<1.8 MPN/100 ml & above

\* These standards are subject to revision.  
 21 mg/l 0.01 0.05 0.00072  
 \*\* Non NABL parameter

अनुसंधान में इस्तेमाल/ Analyzed by...  
 अधिकृत हस्ताक्षर/ Authorized Signatory...

क्र. सं. का अधिकारी प्रयोगशाला/ C.E.O. Central Laboratory

Note: 1 The results in the Test Report relate only to the items tested; 2. The report shall not be reproduced except in full, without the written permission of laboratory. 3. The test report pertains to the sample as received in Lab.

**CENTRAL LABORATORY, U.P. POLLUTION CONTROL BOARD, LUCKNOW**  
Analytical Data of Samples Collected by Regional Office Gorakhpur

S. No.	Sample Code	Sampling Point	Date of Sampling	Date of sample Receiving	Arsenic As (mg/l)
1	UPPCB/CL/W/852/20	Handpump water from village Baraon, Barhaj, Deoria	12.11.2020	13.11.2020	BDL
2	UPPCB/CL/W/853/20	Handpump water from village Karajaha, Barhaj, Deoria	12.11.2020	13.11.2020	BDL
3	UPPCB/CL/W/854/20	Handpump water from village Khudiya Buzurg, Barhaj, Deoria	12.11.2020	13.11.2020	BDL
4	UPPCB/CL/W/855/20	Handpump water from village Mahen Babu, Barhaj, Deoria	12.11.2020	13.11.2020	BDL
5	UPPCB/CL/W/856/20	Handpump water from village Arjundiha, Gauri Bazar, Deoria	12.11.2020	13.11.2020	BDL
6	UPPCB/CL/W/857/20	Handpump water from village Birwa Harizan Basti, Gauri Bazar, Deoria	12.11.2020	13.11.2020	BDL
7	UPPCB/CL/W/858/20	Handpump water from village Sekhui, Gauri Bazar, Deoria	12.11.2020	13.11.2020	BDL
8	UPPCB/CL/W/859/20	Handpump water from village Rampur Tiwari, Rampur Karkhana, Deoria	12.11.2020	13.11.2020	BDL
9	UPPCB/CL/W/860/20	Handpump water from village Barawa Chmaniya Khas, Ghughuli, Mahrajganj	12.11.2020	13.11.2020	BDL
10	UPPCB/CL/W/861/20	Handpump water from village Harakhi Khas, Ghughuli, Mahrajganj	12.11.2020	13.11.2020	BDL
11	UPPCB/CL/W/862/20	Handpump water from village Naryanpur South Tola, Ghughuli, Mahrajganj	12.11.2020	13.11.2020	BDL
12	UPPCB/CL/W/863/20	Handpump water from village Chak Daiya Bazar Tola, Karya, Kushinagar	12.11.2020	13.11.2020	BDL
13	UPPCB/CL/W/864/20	Handpump water from village Mainpur, Rajawa War, Karya, Kushinagar	12.11.2020	13.11.2020	BDL
14	UPPCB/CL/W/865/20	Handpump water from village Sirsia Khoiya Badka Tola, Karya Kushinagar	12.11.2020	13.11.2020	BDL
15	UPPCB/CL/W/866/20	Handpump water from village Gulriha Khas, Nebua Naurangia, Kushinagar	12.11.2020	13.11.2020	BDL
16	UPPCB/CL/W/867/20	Handpump water from village Narkatia Khas, Hata, Kushinagar	12.11.2020	13.11.2020	BDL
17	UPPCB/CL/W/868/20	Handpump water from village Parsauni Khas, Hata, Kushinagar	12.11.2020	13.11.2020	BDL
18	UPPCB/CL/W/869/20	Handpump water from village Sukrauli Khas, Mundera, Kaptainganj, Kushinagar	12.11.2020	13.11.2020	BDL
19	UPPCB/CL/W/870/20	Handpump water from village Andhya, Hatwa, Karya Kushinagar	12.11.2020	13.11.2020	BDL
20	UPPCB/CL/W/871/20	Handpump water from village Kalyanpur (Kanhar Purwa) Compierganj, Gorakhpur	12.11.2020	13.11.2020	BDL
21	UPPCB/CL/W/872/20	Handpump water from village Kalyanpur (Mithaura Kuli) Compierganj, Gorakhpur	12.11.2020	13.11.2020	BDL
22	UPPCB/CL/W/873/20	Handpump water from village Jamuar, Jangal Kaudia, Gorakhpur	12.11.2020	13.11.2020	BDL
23	UPPCB/CL/W/874/20	Handpump water from village Padi Phera Khas Nebua Naurangia, Kushinagar	12.11.2020	13.11.2020	BDL
24	UPPCB/CL/W/875/20	Handpump water from village Rampur Khurd Khas Nebua Naurangia, Kushinagar	12.11.2020	13.11.2020	BDL
25	UPPCB/CL/W/876/20	Handpump water from village Bahira Bari Sevarahi, Kushinagar	12.11.2020	13.11.2020	BDL
26	UPPCB/CL/W/877/20	Handpump water from village Sarai Khurd, Sevarahi, Kushinagar	12.11.2020	13.11.2020	BDL
27	UPPCB/CL/W/878/20	Handpump water from village Chakhani Khas Korara Tola, Tam Kuhiraj, Kushinagar	12.11.2020	13.11.2020	BDL
28	UPPCB/CL/W/879/20	Handpump water from village Dhanauji Tam Kuhiraj, Kushinagar	12.11.2020	13.11.2020	BDL
29	UPPCB/CL/W/880/20	Handpump water from village Madhopur Buzurg, Tam Kuhiraj, Kushinagar	12.11.2020	13.11.2020	BDL
30	UPPCB/CL/W/881/20	Handpump water from village Madhopur Buzurg, Manjharla, Tam Kuhiraj, Kushinagar	12.11.2020	13.11.2020	BDL
31	UPPCB/CL/W/882/20	Handpump water from village Sarai Buzurg, Ramkola, Tam Kuhiraj, Kushinagar	12.11.2020	13.11.2020	BDL
32	UPPCB/CL/W/883/20	Handpump water from village Jhangaha, Khorabar, Gorakhpur	12.11.2020	13.11.2020	BDL
33	UPPCB/CL/W/884/20	Handpump water from village Kayakpur, Khorabar, Gorakhpur	12.11.2020	13.11.2020	BDL

BDL= Below detection limit

M.S.  
16/12/2020  
S.L.  
14/12/2020  
S.A.

M.S.  
16/12/20  
A.S.O.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....

Dt. of compilation of test report ..... 17/12/2020

Dt./period of testing... 2/11/2020 - 13/11/2020

1. नमूने का स्रोत/समय/समय/समय/समय Sample Source (Tabewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) ... Handpump
2. नमूने का प्रकार (संग्रह/संयोजित/संयोजित) Type of Sample (Grab/Composite/Integrated) ... Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by ... Mr. Asim Kumar Sarin (S.A.)
4. रूपांतरित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकलिंग नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jar/any Other) ... 24 + 1L
6. नमूने एकत्रण की तिथि/ Date of Sample Collection ... 2/11/2020
7. विश्लेषण हेतु उपकरण/ Analysis Indented by ... U.P.C.B. P.O. Bansi
8. प्रयोगशाला में नमूने प्राप्त की तिथि/ Date of Sample receipt in Laboratory ... 3/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं./ S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का स्रोत/समय/समय/समय/समय Code No./Sampling Point UPPCB/01/12/1796/2020 H. near Ashu Sharma's house, N.P. Bansi, Gomti Nagar, Lucknow	Detection Range
			Requirement (Acceptance limit)	Permissible Limit		
1	घ. एच./ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation	7.28	02-12
2	गुदाल्प/ Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00	/	1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	इकाई / Hazen	5.00	15.00	/	5-10000 Hazen
4	कठकता/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रम/सेमी μS/cm	NS	NS	/	0.1 -10000 μS/cm
5	संवेष्टित कठकता/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./ली. / mg/l	NS	NS	/	5.0-10000 mg/l
6	घुलित कठकता/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./ली. / mg/l	500.0	2000.0	206.0	5.0-10000 mg/l
7	कुल कठकता/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./ली. / mg/l	NS	NS	/	5.0-15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./ली. / mg/l	200.00	600.00	202.0	10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग्रा./ली. / mg/l	75.00	200.00	/	10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./ली. / mg/l	30.00	100.00	/	10.0-1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./ली. / mg/l	NS	NS	/	1.0-100 mg/l
12	पोटेशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./ली. / mg/l	NS	NS	/	1.0-100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मि.ग्रा./ली. / mg/l	230.00	1000.00	40.0	3.0-500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग्रा./ली. / mg/l	1.00	1.50	/	0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500 -SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मि.ग्रा./ली. / mg/l	200.00	400.00	9.755	0.1-200 mg/l
16	फॉस्फेट-सी/ Phosphate as P, 4590 P D Stannous Chloride Method	मि.ग्रा./ली. / mg/l	NS	NS	/	0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग्रा./ली. / mg/l	45.00	No relaxation	4.019	0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मि.ग्रा./ली. / mg/l	0.50	No relaxation	/	0.1-50 mg/l
19	अल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./ली. / mg/l	200.00	600.00	/	20-5000 mg/l
20	बी.ओ.डी./ BOD, 5 day 20 °C IS 3025 (Part 4): 1993 Biochemical Oxygen Demand	मि.ग्रा./ली. / mg/l	NS	NS	/	1.0-1000 mg/l
21	सी.ओ.डी./ COD, 5220 B Open Reflux Method	मि.ग्रा./ली. / mg/l	NS	NS	/	4.0-1000 mg/l
22	कुल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.05	No relaxation	ND	0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.05	1.50	0.0006	0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.003	No relaxation	0.0058	0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.01	No relaxation	0.0518	0.01-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.30	No relaxation	/	0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	0.02	No relaxation	0.0052	0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./ली. / mg/l	5.00	15.00	0.0252	0.01-1000mg/l
29	कुल कॉलोनिज/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एम्पीएन/100 पी.सी. / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above
30	फेकल कॉलोनिज/ Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एम्पीएन/100 पी.सी. / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above

\* These standards are subject to revision.

अनुसंधान/ Analyzed by: *Asim Kumar Sarin* 17/12/2020

अधिकृत हस्ताक्षर/ Authorised Signatory: *Asim Kumar Sarin* 17/12/2020

उप पर्याप्त संचित केन्द्रीय प्रयोगशाला/ C.E.B. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory 3. The test report pertains to the sample as received in Lab.



TEST REPORT: WATER LABORATORY (GROUND WATER)

Certificate No. TC-6345

S.No. ....  
Dt. of compilation of test report 17/12/2020

Dt./period of testing... 3/11/2020 - 13/11/2020

1. नमूने का स्रोत/संज्ञक/सकई घरे/हस्त/ अन्य Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (ग्रेब/कम्पोजिट/इंटीग्रेटेड) / Type of Sample (Grab/Composite/Integrated) GWB
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Ms. Arun Kumar Srivastava (SA)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्र एवं पैकिंग/ Quantity & Packing (Plastic Jar/can/Any Other) 2 Lt + 1 Lt
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 3/11/2020
7. विश्लेषण हेतु अनुरोध/ Analysis Indented by UPPCL Ka Banta
8. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of Sample receipt in Laboratory 3/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10306:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड सं. / एकत्रण स्थान Code No./Sampling Point <u>UPPCL/12/1797/2020</u> <u>Ms. Arun Kumar Srivastava</u> <u>UPPCL Ka Banta</u>	Detection Range
			Requirement (Acceptable Limit)	Permissible Limit		
1	pH, 4500 H B Electrometric Method		6.5-8.5	No relaxation	<u>7.35</u>	02-12
2	घनत्व/ Turbidity, 2130 B Nephelometric Method	एनटीयू / NTU	1.00	5.00	/	1-500 NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हेजन / Hazen	5.00	15.00	/	5-10000 Hazen
4	चालकता/ Conductivity, 2510 B Laboratory Method	माइक्रो सेंटीमिटर/सेमी μS/cm	NS	NS	/	0.1 -10000 μS/cm
6	लवणकण/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	ग्राम/ली. / mg/l	NS	NS	/	5.0 -10000 mg/l
6	द्रिजोवले कण/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	ग्राम/ली. / mg/l	500.0	2000.0	<u>302.0</u>	5.0 -10000 mg/l
7	कुल कण/ Total Solids, 2540 B Total Solids dried at 103-105 °C	ग्राम/ली. / mg/l	NS	NS	/	5.0 -15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	ग्राम/ली. / mg/l	200.00	600.00	<u>152.0</u>	10.0 -5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	ग्राम/ली. / mg/l	75.00	200.00	/	10.0 -1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	ग्राम/ली. / mg/l	30.00	100.00	/	10.0 -1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	ग्राम/ली. / mg/l	NS	NS	/	1.0- 100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	ग्राम/ली. / mg/l	NS	NS	/	1.0- 100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	ग्राम/ली. / mg/l	250.00	1000.00	<u>9.0</u>	3.0 -500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	ग्राम/ली. / mg/l	1.00	1.50	/	0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	ग्राम/ली. / mg/l	200.00	400.00	<u>7.58</u>	0.1 -200 mg/l
16	फॉस्फेट-पी/ Phosphate as P, 4500 P D Stannous Chloride Method	ग्राम/ली. / mg/l	NS	NS	/	0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	ग्राम/ली. / mg/l	45.00	No relaxation	<u>3.792</u>	0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	ग्राम/ली. / mg/l	0.50	No relaxation	/	0.1 -50 mg/l
19	एल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	ग्राम/ली. / mg/l	200.00	600.00	/	20-5000 mg/l
20	केमिकल ऑक्सीजन डिमांड/ COD, 3 day 20 °C IS 3025 (Part 4): 1993 Bio chemical Oxygen Demand	ग्राम/ली. / mg/l	NS	NS	/	1.0 -1000 mg/l
21	केमिकल ऑक्सीजन डिमांड/ COD, 5220 B Open Reflux Method	ग्राम/ली. / mg/l	NS	NS	/	4.0 -1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.05	No relaxation	<u>ND</u>	0.05-1000 mg/l
23	कॉपर/ Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.05	1.50	<u>ND</u>	0.01-1000 mg/l
24	कैडमियम/ Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.003	No relaxation	<u>0.0038</u>	0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.01	No relaxation	<u>0.0546</u>	0.09-1000 mg/l
26	आयरन/ Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.30	No relaxation	/	0.05-1000 mg/l
27	निकेल/ Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	0.02	No relaxation	<u>0.0238</u>	0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	ग्राम/ली. / mg/l	5.00	15.00	<u>0.131</u>	0.01-1000 mg/l
29	टोटल कोलोनिज/ Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकत्रीकरण/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above
30	फेकल कोलोनिज/ Faecal Coliform, 9221 E Multiple Tube Fermentation Technique	एकत्रीकरण/ 100 मि.ली. / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above

\* These standards are subject to revision.

एनालिसिस/ Analysed by... Arjun 17/12/2020

अधिकृत हस्ताक्षर/ Authorised Signatory... P. Singh 17/12/2020

मुख्य परीक्षक/ केन्द्रीय प्रयोगशाला/ C.L.O. Central Laboratory

Note: 1. The results in the Test Report relate only to the items tested: 2. The report shall not be reproduced-except in full, without the written permission of laboratory.

3. The test report pertains to the sample as received in Lab.





TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report... 17/12/2020

Dt./period of testing... 3/11/2020 - 13/11/2020

Certificate No. TC-6345

1. नमूने का स्रोत/सूत्र/सफाई घाट/हैंडपंप अन्य/ Sample Source (Tubewell/Dugwell/Shallow Pump/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (गिर/कम्पोजिट/इंटीग्रेटेड)/ Type of Sample (Grab/Composite/Integrated) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Ms. Anam Kumar Srivastava (S.A.)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour ...
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic Jar/Can/Any Other) 2 Lt. P.L.U.
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 2/11/2020
7. विश्लेषण हेतु आवेदनकर्ता/ Analysis Indented by UPPCB RO Bansi
8. प्रयोगशाला में नमूना प्राप्ति की तिथि/ Date of Sample receipt in Laboratory 3/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WRF, 23rd Edition, 2017

क्रम सं. / S. No.	पैरामीटर / Parameter	एकक / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का संकेत सं./ एकत्रण स्थल Code No./Sampling Point <u>UPPCB/CL/WT/299/2020</u> <u>Handpump, Bansi, Gomti Nagar, Lucknow</u>	Detection Range
			Relaxation (Acceptable Limit)	Permissible Limit		
1	पी. एच/ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation	<u>7.62</u>	02-12
2	मंदसापन/ Turbidity, 2130 B Nephelometric Method	एन.टी.यू. / NTU	1.00	5.00	/	1-500NTU
3	रंग/ Colour, 2120 B Visual Comparison Method	हैज़न / Hazen	5.00	15.00	/	5-10000 Hazen
4	चलनायक/ Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रन/सेमी $\mu$ S/cm	NS	NS	/	0.1 -10000 $\mu$ S/cm
5	सस्पेंडेड सॉलिड/ Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS	/	5.0 -10000 mg/l
6	डिसॉल्वेड सॉलिड/ Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग./सी. / mg/l	500.0	2000.0	<u>277.0</u>	5.0 -10000 mg/l
7	टोटल सॉलिड/ Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग./सी. / mg/l	NS	NS	/	5.0 -15000 mg/l
8	कठोरता/ Hardness, 2340 C EDTA Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00	<u>274.0</u>	10.0-5000 mg/l
9	कैल्शियम/ Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग./सी. / mg/l	75.00	200.00	/	10.0-1000 mg/l
10	मैग्नीशियम/ Magnesium, 3500 -Mg B Calculation Method	मि.ग./सी. / mg/l	30.00	100.00	/	10.0 - 1000 mg/l
11	सोडियम/ Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS	/	1.0- 100 mg/l
12	पोटैशियम/ Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग./सी. / mg/l	NS	NS	/	1.0- 100 mg/l
13	क्लोराइड/ Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मि.ग./सी. / mg/l	250.00	1000.00	<u>10.0</u>	3.0- 500 mg/l
14	फ्लोराइड/ Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग./सी. / mg/l	1.00	1.50	/	0.1-10 mg/l
15	सल्फेट/ Sulphate as SO <sub>4</sub> <sup>-2</sup> , 4500 -SO <sub>4</sub> <sup>-2</sup> E Turbidimetric Method	मि.ग./सी. / mg/l	200.00	400.00	<u>10154</u>	0.1-200 mg/l
16	फॉस्फेट-पी/ Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग./सी. / mg/l	NS	NS	/	0.01-50 mg/l
17	नाइट्रेट/ Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग./सी. / mg/l	45.00	No relaxation	<u>4.293</u>	0.05-100 mg/l
18	अमोनिया/ Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मि.ग./सी. / mg/l	0.50	No relaxation	/	0.1- 50 mg/l
19	एल्कैलिनिटी/ Alkalinity, 2320 B Titrimetric Method	मि.ग./सी. / mg/l	200.00	600.00	/	20-5000 mg/l
20	बायोलॉजिकल ऑक्सीजन डिमांड/ BOD, 3 day 20 °C IS 3025 ( Part 4); 1993 Bio chemical Oxygen Demand	मि.ग./सी. / mg/l	NS	NS	/	1.0-1000 mg/l
21	सी.ओ.डी/ COD, 5220 B Open Reflux Method	मि.ग./सी. / mg/l	NS	NS	/	4.0-1000 mg/l
22	टोटल क्रोमियम/ Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	No relaxation	<u>0.0008</u>	0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.05	1.50	<u>NS</u>	0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.003	No relaxation	<u>0.0052</u>	0.01-1000 mg/l
25	लेड/ Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.01	No relaxation	<u>0.085</u>	0.05-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.30	No relaxation	/	0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	0.02	No relaxation	<u>0.0288</u>	0.04-1000 mg/l
28	ज़िंक/ Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग./सी. / mg/l	5.00	15.00	<u>0.1006</u>	0.01-1000mg/l
29	टोटल कोलिफॉर्म /Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकजीयू/100 मि.लीटर / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above
30	फैकल कोलिफॉर्म /Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एकजीयू/100 मि.लीटर / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above

\* These standards are subject to revision.

विश्लेषण के द्वारा/ Analysed by... 17/12/2020

अधिकृत हस्ताक्षर/ Authorised Signatory... 17/12/2020

उप पर्याप्त अधिक केन्द्रीय प्रयोगशाला/ C.E.O. Central Laboratory

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TEST REPORT: WATER LABORATORY (GROUND WATER)

S.No. ....

Dt. of compilation of test report 17/12/2020

Certificate No. TC-6345  
Dt./period of testing... 3/11/2020 - 12/11/2020

1. नमूने का स्रोत (Well/Handpump/कूप/हैंडपंप अन्य) Sample Source (Tubewell/Dugwell/Shallow Well/Supply Water/Handpump/ any other specify) Handpump
2. नमूने का प्रकार (Grab/कम्पोजिट/इन्टीग्रेटेड/ Type of Sample (Grab/Composite/Integrated)) Grab
3. नमूने एकत्र करने वाले व्यक्ति का विवरण/ Sample Collected by Ms. Arun Kumar Srivastava (S.A.)
4. एकत्रित नमूने का रंग एवं गंध/ Colour & Odour
5. एकत्रित नमूने की मात्रा एवं पैकिंग/ Quantity & Packing (Plastic/Jerican/Any Other) 2 Lt + 1 Lt
6. नमूने एकत्रण की तिथि/ Date of Sample Collection 2-11-2020
7. विश्लेषण हेतु संकेतित/ Analysis Indicated by UPPCB RO Sample
8. प्रयोगशाला में नमूने प्राप्ति की तिथि/ Date of Sample receipt in Laboratory 3/11/2020
9. विश्लेषण विधि/ method of analysis .... APHA, AWWA, WEF, 23rd Edition, 2017

क्र. सं. / S. No.	पैरामीटर / Parameter	इकाई / Unit	Drinking Water Standards* Source: IS 10500:2012 (2 <sup>nd</sup> Revision)		Results नमूने का कोड नं./ एकत्रण स्थान Code No./Sampling Point <u>UPPCB TWT/800/20</u> <u>M. Arun Kumar Srivastava</u> <u>Nagar Panchayat, Bulandshahr Distt</u>	Detection Range
			Requirement (Acceptable Limit)	Permissible Limit		
1	पी. एच/ pH, 4500 H <sup>+</sup> B Electrometric Method		6.5-8.5	No relaxation	7.66	6.5-8.5
2	तurbidity / Turbidity, 2130 B Nephelometric Method	एन टीयू / NTU	1.00	5.00	/	1-500 NTU
3	रंग / Colour, 2120 B Visual Comparison Method	इयूज / Hazen	5.00	15.00	/	5-10000 Hazen
4	व्यवहार्यता / Conductivity, 2510 B Laboratory Method	माइक्रो हाइड्रॉन / से.ी. µS/cm	NS	NS	/	0.1 -10000 µS/cm
5	सस्पेंडेड सॉलिड्स / Suspended Solids, 2540 D Total Suspended Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS	/	5.0 -10000 mg/l
6	दोघोल्य सॉलिड्स / Dissolved Solids, 2540 C Total Dissolved Solids dried at 180 °C	मि.ग्रा./सी. / mg/l	500.0	2000.0	284.0	5.0 -10000 mg/l
7	टोटल सॉलिड्स / Total Solids, 2540 B Total Solids dried at 103-105 °C	मि.ग्रा./सी. / mg/l	NS	NS	/	5.0 -15000 mg/l
8	कठोरता / Hardness, 2340 C EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00	240	10.0 -5000 mg/l
9	कैल्शियम / Calcium, 3500 -Ca B EDTA Titrimetric Method	मि.ग्रा./सी. / mg/l	75.00	200.00	/	10.0 -1000 mg/l
10	मैग्नीशियम / Magnesium, 3500 -Mg B Calculation Method	मि.ग्रा./सी. / mg/l	30.00	100.00	/	10.0 - 1000 mg/l
11	सोडियम / Sodium Na, 3500-Na B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS	/	1.0 - 100 mg/l
12	पोटैशियम / Potassium K, 3500-K B Flame Emission Photometric Method	मि.ग्रा./सी. / mg/l	NS	NS	/	1.0 - 100 mg/l
13	क्लोराइड / Chloride as Cl <sup>-</sup> , 4500- Cl <sup>-</sup> B Argentometric Method	मि.ग्रा./सी. / mg/l	250.00	1000.00	13.0	3.0 - 500 mg/l
14	फ्लोराइड / Fluoride as F <sup>-</sup> , 4500- F <sup>-</sup> D SPADNS Method	मि.ग्रा./सी. / mg/l	1.00	1.50	/	0.1-10 mg/l
15	सल्फेट / Sulphate as SO <sub>4</sub> <sup>2-</sup> , 4500 -SO <sub>4</sub> <sup>2-</sup> E Turbidimetric Method	मि.ग्रा./सी. / mg/l	200.00	400.00	9.83	0.1 -200 mg/l
16	फॉस्फेट-पी / Phosphate as P, 4500 P D Stannous Chloride Method	मि.ग्रा./सी. / mg/l	NS	NS	/	0.01-50 mg/l
17	नाइट्रेट / Nitrate, 4500- NO <sub>3</sub> <sup>-</sup> B Ultraviolet Spectrophotometric Method	मि.ग्रा./सी. / mg/l	45.00	No relaxation	3.891	0.05-100 mg/l
18	अमोनिया / Ammonia, 4500 NH <sub>3</sub> -F Phenate Method	मि.ग्रा./सी. / mg/l	0.50	No relaxation	/	0.1 - 50 mg/l
19	एल्केलिनिटी / Alkalinity, 2320 B Titrimetric Method	मि.ग्रा./सी. / mg/l	200.00	600.00	/	20-5000 mg/l
20	बायोलॉजिकल ऑक्सीजन डिमांड / BOD, 3 day 20 °C IS 3025 ( Part 4): 1993 Bio chemical Oxygen Demand	मि.ग्रा./सी. / mg/l	NS	NS	/	1.0 -1000 mg/l
21	सी.ओ.डी / COD, 5220 B Open Reflux Method	मि.ग्रा./सी. / mg/l	NS	NS	/	4.0 -1000 mg/l
22	टोटल क्रोमियम / Total Chromium (T.Cr), 3111 B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	No relaxation	0.0042	0.05-1000 mg/l
23	कॉपर / Copper (Cu), 3111- B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.05	1.50	ND	0.01-1000 mg/l
24	कैडमियम / Cadmium (Cd), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.003	No relaxation	0.0054	0.01-1000 mg/l
25	लेड / Lead (Pb), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.01	No relaxation	0.0706	0.09-1000 mg/l
26	आयरन / Iron (Fe), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.30	No relaxation	/	0.05-1000 mg/l
27	निकेल / Nickel (Ni), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	0.02	No relaxation	0.0192	0.04-1000 mg/l
28	ज़िंक / Zinc (Zn), 3111-B Atomic Absorption Spectrometry (Direct Air-Ac Flame Method)	मि.ग्रा./सी. / mg/l	5.00	15.00	0.0388	0.01-1000mg/l
29	टोटल कोलीफॉर्म / Total Coliform, 9221 B Multiple Tube Fermentation Technique	एकपीपी/100 पी.सी. / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above
30	फैकल कोलीफॉर्म / Fecal Coliform, 9221 E Multiple Tube Fermentation Technique	एकपीपी/100 पी.सी. / MPN/100 ml	Nil	No relaxation	/	<1.8 MPN/100 ml & above

\* These standards are subject to revision.

एनालिसिस/ Analyzed by Deva 17-12-2020

अधिकृत हस्ताक्षर/ Authorized Signatory [Signature] 17/12/20

उप पर्यावरण संरक्षण प्रयोगशाला / C.E.O. Central Laboratory

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**CENTRAL LABORATORY, U.P. POLLUTION CONTROL BOARD, LUCKNOW**  
**Analytical Data of Samples Collected by Regional Office Basti**

S. No.	Sample Code	Sampling Point	Date of Sampling	Date of sample Receiving	Arsenic As (mg/l)
1	UPPCB/CL/W/796/20	Handpump near Ashish Sharma's house Vill-Deisav dumping yard Nagar Panchayat Bankati, Basti	02.11.2020	03.11.2020	0.0083
2	UPPCB/CL/W/797/20	Handpump near Gaushala Vill- Koilpura dumping yard Nagar Palika Parishad, Basti	02.11.2020	03.11.2020	0.0027
3	UPPCB/CL/W/798/20	Handpump near Devi Prasad's house Vill-Ugrasen Nagar dumping yard Nagar Panchayat Harriya, Basti	02.11.2020	03.11.2020	ND
4	UPPCB/CL/W/799/20	Handpump near Prem Chand's house Vill-Bhataha Jangal dumping yard Nagar Panchayat Babhnau Bazar, Basti	02.11.2020	03.11.2020	0.0105
5	UPPCB/CL/W/800/20	Handpump near Shri Ram Sahay's house Ward no. 14 Shastri Nagar Vill- Bhataha Jangal dumping yard Nagar Panchayat Raudhali Bazar, Basti	02.11.2020	03.11.2020	0.0075

ND= Not Detected

Drinking water standard for Arsenic →

Acceptable limit → 0.01 mg/l  
 permissible limit → 0.05 mg/l

M.K.  
 17/12/20  
 S.A.  
 17/12/20

Pratik B.  
 17/12/20  
 A.S.O.

C.E.O. Central Lab

17-12-2020

**CENTRAL LABORATORY, U.P. POLLUTION CONTROL BOARD, LUCKNOW**  
**Analytical Data of Samples Collected by Regional Office Basti**

S. No.	Sample Code	Sampling Point	Date of Sampling	Date of sample Receiving	Arsenic As (mg/l)
1	UPPCB/CL/W/886/20	Handpump near Liyaquat Ali House village Adampur, Panchayat Adampur, Block Ramnagar, District Basti	17.11.2020	18.11.2020	BDL
2	UPPCB/CL/W/887/20	Handpump near Madhur Shyam House village Bahariya, Panchayat Bahariya, Block Dumariyaganj, District Siddharth Nagar	17.11.2020	18.11.2020	BDL
3	UPPCB/CL/W/888/20	Handpump near Hazarilal House, Habitation name- Ghordhandeah, village Navel, Panchayat Navel, Block Khuniyaon, District Siddharth Nagar	17.11.2020	18.11.2020	BDL
4	UPPCB/CL/W/889/20	Handpump near Shri Brahamchari Yadav House, Habitation name- Dohariya Khurd, village Dohariya Khurd, Panchayat Dohariya Khurd, Block Shohratgarh, District Siddharth Nagar	17.11.2020	18.11.2020	BDL
5	UPPCB/CL/W/890/20	Handpump near Shri Ram Narayan Verma House, Habitation name- Jhaganti, village Jhaganti, Panchayat Jhaganti, Block Birdpur, District Siddharth Nagar	17.11.2020	18.11.2020	BDL
6	UPPCB/CL/W/891/20	Handpump near Shri Ram Ganesh House, village Ahiraula, Panchayat Ahiraula, Block Ramnagar, District Basti	17.11.2020	18.11.2020	BDL
7	UPPCB/CL/W/904/20	Handpump near Kanchan Devi House, Habitation name- Dhebarua Khas, village Dhebarua, Panchayat Dhebarua, Block Barhni, District Siddharth Nagar	19.11.2020	20.11.2020	BDL
8	UPPCB/CL/W/905/20	Handpump near Shri Vasudev Prasad Chaurasia House, Habitation name- Maharajganj, village Maharajganj, Panchayat Maharajganj, Block Tulsipur, District Balrampur	19.11.2020	20.11.2020	BDL

BDL= Below detection limit

M.S.  
16/11/20  
S.A.

14/11/20

19/11/20  
A.S.O.

C.E.O. Central Lab

Health Department Compliance Original Application No. 384/2019  
(Earlier O. A. No. 156/2015) Mrs. Sunita Pandey & Anr. Applicant(s)  
Versus Union of India & Ors. Respondent(s)

This Report is regarding the steps to deal with the problem of contamination of ground water due to Arsenic and availability of clean drinking water in Bahraich, Ballia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Ghorakpur, Lakhimpur Kheri, Meerut, Mirzapur, Moradabad, Rai Bareilly, Santkabirnagar, Shahjahanpur, Siddharthnagar, Sant Ravidas Nagar and Unnao.

In the light of the above requirement and to deal with the problems and to help out the common Man , Health Department has taken the opportunity of the Mukhya Mantri Arogya Swasthya Mela to conduct Health Camps in various places in every districts. The Doctors were instructed to look into all the problems that can be due to arsenic contamination mainly cancer . The total number of camps conducted in the above mentioned districts are - 980 and The total number of patients who have come to the camp is -75236. Many other parameters including Cancer was looked into and the summary is as under. The detailed report is Annexed herewith.

No. of Patient (Liver)	No. of Patient (Respiratory)	No. of Patient (Gastro)	No. of Patient (Diabetes)	No. of Patient (Skin)	No. of Patient (TB Suspected)	No. of Patient (Anemia)	No. of Patient (Hypertension)	No. of Patient (Cancer)	No. of Patient Referred
2481	5663	7089	3243	11512	438	2169	2284	79	1610

Date - 15 JAN 2021

*Sunita*  
 निदेशक (स्वास्थ्य)  
 चिकित्सा एवं स्वास्थ्य सेवायें  
 उत्तर प्रदेश, लखनऊ।

### Arsenic Report

S.no	District Name	Total Camps	Total No. of Patients	No. of Patient (Liver)	No. of Patient (Respiratory)	No. of Patient (Gastro)	No. of Patient (Diabetes)	No. of Patient (Skin)	No. of Patient (TB Suspected)	No. of Patient (Anemia)	No. of Patient (Hypertension)	No. of Patient (Cancer)	No. of Patient Referred
1	Bahraich	49	4770	135	234	415	198	575	17	207	214	0	94
2	Ballia	80	4262	242	391	507	250	536	26	116	80	1	234
3	Balrampur	24	2235	26	82	113	81	301	12	98	83	0	16
4	Bareilly	71	5201	204	464	572	177	1198	50	137	95	1	163
5	Basti	38	2436	95	283	225	103	195	7	35	86	0	0
6	Bijnor	62	5261	178	523	562	335	1007	28	133	122	59	53
7	Chandauli	23	1081	32	116	110	40	160	3	30	27	1	29
8	Ghazipur	62	4415	163	504	477	205	820	21	153	159	0	36
9	Gonda	52	5047	111	363	498	114	826	33	184	121	0	59
10	Gorakhpur	79	4557	181	275	329	292	632	25	125	117	6	55
11	Kheri	60	4429	241	415	435	244	656	9	209	223	0	59
12	Meerut	57	2968	50	205	329	153	796	23	81	159	0	178
13	Mirzapur	38	6665	118	198	456	138	376	15	150	69	0	32
14	Moradabad	50	3136	88	253	238	143	621	21	80	81	2	25
15	Rae Bareli	53	3456	91	237	429	146	483	35	100	163	0	96
16	Sant Kabir Nagar	22	1847	69	181	0	130	313	0	48	115	0	19
17	Sant Ravidas Nagar (Bhadohi)	17	1587	32	105	189	52	207	3	14	81	0	28
18	Shahjahanpur	47	4482	162	307	510	112	844	26	109	112	2	120
19	Siddharthnagar	54	4186	161	317	373	271	557	67	99	111	7	129
20	Unnao	42	3215	102	210	322	59	409	17	61	66	0	185
	<b>Total</b>	<b>980</b>	<b>75236</b>	<b>2481</b>	<b>5663</b>	<b>7089</b>	<b>3243</b>	<b>11512</b>	<b>438</b>	<b>2169</b>	<b>2284</b>	<b>79</b>	<b>1610</b>



# उत्तर प्रदेश जल निगम

प्रधान कार्यालय: 6, राणा प्रताप मार्ग, लखनऊ - 226001

पत्रांक : 12/2022 - NGT - 0A - 304/2019/21 दिनांक : 14/01/2021

सेवा में,

श्री ए0एन0 बाजपेयी,  
पी0पी0एस0, मा0 सदस्य,  
ओवरसाइट कमेटी,  
एन0जी0टी0, लखनऊ उत्तर प्रदेश।

विषय:-मा0 राष्ट्रीय हरित न्यायाधिकरण में योजित ओ0ए0 संख्या 384/2019 के संबंध में।

महोदय,

उपरोक्त विषयक कृपया अपने ई-मेल दिनांक 30.09.2020 का संदर्भ ग्रहण करने का कष्ट करें, जिसके द्वारा मा0 राष्ट्रीय हरित न्यायाधिकरण में योजित ओ0ए0 संख्या 384/2019 (श्रीमती सुनिता पाण्डेय एवं अन्य) की माह दिसम्बर 2020 की प्रगति रिपोर्ट उपलब्ध कराये जाने के निर्देश दिये गये हैं।

उक्त के अनुपालन में माह दिसम्बर 2020 की प्रगति रिपोर्ट संलग्न कर आवश्यक कार्यवाही हेतु प्रेषित है।

संलग्नक:-उपरोक्तानुसार।

भवदीय

(जी0पी0 शुक्ला)

मुख्य अभियन्ता (ग्रामीण)

पृ0सं0 एवं दिनांक उपरोक्तानुसार।

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. अनु सचिव, नमामि गंगे तथा ग्रामीण जलापूर्ति अनुभाग-1, उ0प्र0 शासन को संलग्न सहित सूचनार्थ प्रेषित।
2. संयुक्त प्रबंध निदेशक, उ0प्र0 जल निगम, लखनऊ।

मुख्य अभियन्ता (ग्रामीण)

**THE CONCERNED DEPARTMENTS ARE REQUIRED TO SUBMIT MONTHLY PROGRESS REPORT OF O.A 384/2019 IN RE: MRS  
SUNITA PANDEY &NR. VERSUS UNION OF INDIA&ORS.  
Concerned Department**

1-UP Jal Nigam

S. No	Direction by Hon'ble NGT	Concerned Department	Compliance Status November	Compliance Status December																																													
1	Status of supply of potable water in Arsenic affected areas	U.P Jal Nigam	<p>partially Complied</p> <ul style="list-style-type: none"> <li>There are 707 arsenic affected habitation in the State. As per Jal Nigam, details of progress in piped water supply works in the arsenic affected areas is as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Date</th> <th>No of Arsenic affected habitation</th> <th>population</th> </tr> </thead> <tbody> <tr><td>As on 25-03-2019</td><td>707</td><td>532507</td></tr> <tr><td>As on 25-06-2019</td><td>650</td><td>457893</td></tr> <tr><td>As on 31-03-2020</td><td>344</td><td>293441</td></tr> <tr><td>As on 30-06-2020</td><td>164</td><td>233647</td></tr> <tr><td>As on 30-09-2020</td><td>124</td><td>196652</td></tr> <tr><td>As on 30-11-2020</td><td>123</td><td>195350</td></tr> </tbody> </table> <p>presently 123 habitats are there which are not covered by piped water supply Out of which 13 habitations would be completed by December 2020 and 35 habitations would be completed by March 2021 through ongoing pipe water supply schemes Further 110 habitations are proposed to be covered by the community Water Purification plant (CWPP).. out of which 24 habitations has been covered by CWPP</p>	Date	No of Arsenic affected habitation	population	As on 25-03-2019	707	532507	As on 25-06-2019	650	457893	As on 31-03-2020	344	293441	As on 30-06-2020	164	233647	As on 30-09-2020	124	196652	As on 30-11-2020	123	195350	<p>partially Complied</p> <ul style="list-style-type: none"> <li>There are 707 arsenic affected habitation in the State. As per Jal Nigam, details of progress in piped water supply works in the arsenic affected areas is as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Date</th> <th>No of Arsenic affected habitation</th> <th>population</th> </tr> </thead> <tbody> <tr><td>As on 25-03-2019</td><td>707</td><td>532507</td></tr> <tr><td>As on 25-06-2019</td><td>650</td><td>457893</td></tr> <tr><td>As on 31-03-2020</td><td>344</td><td>293441</td></tr> <tr><td>As on 30-06-2020</td><td>164</td><td>233647</td></tr> <tr><td>As on 30-09-2020</td><td>124</td><td>196652</td></tr> <tr><td>As on 30-11-2020</td><td>123</td><td>195350</td></tr> <tr><td>As on 31-12-2020</td><td>119</td><td>191850</td></tr> </tbody> </table> <p>In 164 Arsenic affected habitations 45 habitations are covered by PWS by December 2020 and 44 habitations will be covered by PWS in March 2021. Presently 119 habitations which are not covered by piped water supply has been covered by the community Water Purification plant (CWPP).</p>	Date	No of Arsenic affected habitation	population	As on 25-03-2019	707	532507	As on 25-06-2019	650	457893	As on 31-03-2020	344	293441	As on 30-06-2020	164	233647	As on 30-09-2020	124	196652	As on 30-11-2020	123	195350	As on 31-12-2020	119	191850
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2	Dismantling of hand pumps having Arsenic Concentration beyond BIS permissible limits.	U.P Jal Nigam	<p>partially Complied</p> <ul style="list-style-type: none"> <li>Identification and marking (marked red) of hand pumps having Arsenic Concentration beyond BIS permissible limit has been done.</li> <li>The HP is maintained by Panchayati Raj Department. Request to comply order of Hon'ble NGT has been made to Director Panchayati Raj Department vide this office letter no 150/2042-NGT(O.A.-384/2019)/20 Dated 27-07-2020</li> </ul>	<p>partially Complied</p> <ul style="list-style-type: none"> <li>Identification and marking (marked red) of hand pumps having Arsenic Concentration beyond BIS permissible limit has been done.</li> <li>The HP is maintained by Panchayati Raj Department. Request to comply order of Hon'ble NGT has been made to Director Panchayati Raj Department vide this office letter no 150/2042-NGT(O.A.-384/2019)/20 Dated 27-07-2020</li> </ul>																																													

*Asim*  
*BST*

5 मिन

प्रेषक,

निदेशक,  
पंचायतीराज, उत्तर प्रदेश।

सेवा में,

प्रबन्ध निदेशक,  
उत्तर प्रदेश जल निगम,  
लखनऊ।

संख्या: 8/1/4217/2019-8/6/2017-18-19-20 लखनऊ दिनांक 9 अक्टूबर, 2020  
विषय: मा0 राष्ट्रीय हरित न्यायाधिकारण के ओ.ए0 संख्या-384/2019 में दिनांक-11.09.2019 को  
दिये गये आदेश का अनुपालन सुनिश्चित करने के सम्बन्ध में।

महोदय,

कृपया उपर्युक्त विषयक अपने कार्यालय पत्रांक-150/2042-NGT(O.A.384/2019/20 दिनांक-27.07.2020 का संदर्भ ग्रहण करने का कष्ट करें, जिसके अन्तर्गत अवगत कराया गया है कि प्रदेश के ग्रामीण क्षेत्र में अधिष्ठापित हैण्डपम्पों से प्राप्त पेयजल में आर्सेनिक की मात्रा निर्धारित सीमा से अधिक होने के दृष्टिगत मा0 राष्ट्रीय हरित न्यायाधिकारण में ओ.ए0 संख्या-384/2019 योजित है। मा0 न्यायाधिकारण द्वारा दिनांक-11.09.2019 को आर्सेनिक की समस्या से प्रभावित बस्तियों में अधिष्ठापित हैण्डपम्पों को विघटित(Dismantle) करने हेतु निर्देशित किया गया है। आप द्वारा उक्त पत्र के साथ ग्रामीण क्षेत्र के हैण्डपम्पों के पेयजल का परीक्षण करते हुए आर्सेनिक प्रभावित 1444 बस्तियों का जनपदवार सारांश संलग्न कर मा0 न्यायाधिकारण द्वारा पारित आदेश के क्रम में कार्यवाही करने हेतु अनुरोध किया गया है।

उक्त के क्रम में अवगत कराना है कि शासनादेश संख्या-434/अडतीस-5-2017-21एम/2011 दिनांक-08.05.2017 के क्रम में ग्राम पंचायतों द्वारा ग्रामीण क्षेत्रों में अधिष्ठापित हैण्डपम्पों के रिबोरिंग का कार्य कराया जा रहा है। उल्लेखनीय है कि उक्त शासनादेश में ग्राम पंचायतों द्वारा हैण्डपम्पों को विघटित करने के सम्बन्ध में कोई प्रावधान नहीं किया गया है। आर्सेनिक प्रभावित ग्रामीण क्षेत्रों में अधिष्ठापित हैण्डपम्पों को विघटित(Dismantle) कराने का कार्य जल निगम/जल संस्थान/अन्य सम्बन्धित कार्यदायी संस्था द्वारा कराया जाना ही उचित होगा।

अतः उक्त के क्रम में आपसे अनुरोध है कि कृपया प्रश्नगत प्रकरण में मा0 न्यायाधिकारण द्वारा पारित आदेश के क्रम में आवश्यक कार्यवाही कराने का कष्ट करें। साथ ही यह भी अवगत कराना है कि उक्त प्रकरण की मा0 न्यायालय में शीघ्र ही सुनवाई अपेक्षित है।

भवदीय,

(राज कुमार)

अपर निदेशक(प्रशा0),  
पंचायतीराज, उ0प्र0।

संख्या: 8/1/4217/2018-20।

प्रतिलिपि: अपर मुख्य सचिव, पंचायतीराज विभाग, उ0प्र0 शासन को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

(राज कुमार)

अपर निदेशक(प्रशा0),  
पंचायतीराज, उ0प्र0।

प्रेषक,

निदेशक,

पंचायतीराज, उत्तर प्रदेश।

सेवा में,

जिलाधिकारी,

जनपद—आजमगढ़, बहराईच, बलिया, बलरामपुर, बरेली, बस्ती, चन्दौली, देवरिया, गाजीपुर, गोण्डा, गोरखपुर, लखीमपुर खीरी, कुशीनगर, लखनऊ, महाराजगंज, मऊ, सम्मल, संतकबीर नगर, सिद्धार्थनगर एवं सोनमद, उ०प्र०।

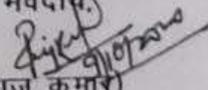
संख्या: 8/148/2019-8/8/2017-18-19-20 लखनऊ दिनांक 9 अक्टूबर, 2020  
विषय: मा० राष्ट्रीय हरित न्यायाधिकारण के ओ.ए० संख्या-384/2019 में दिनांक-11.09.2019 को दिये गये आदेश का अनुपालन के क्रम में आर्सेनिक प्रभावित बस्तियों में अधिष्ठापित हैण्डपम्पों को विघटित(Dismantle) कराने एवं पेयजल हेतु वैकल्पिक व्यवस्था सुनिश्चित कराने के सम्बन्ध में।

महोदय,

कृपया उपर्युक्त विषयक प्रबन्ध निदेशक, उत्तर प्रदेश जल निगम, लखनऊ के कार्यालय पत्रांक-150/2042-NGT(O.A.384/2019/20 दिनांक-27.07.2020(छायाप्रति संलग्न) का संदर्भ ग्रहण करने का कष्ट करें, जिसके अन्तर्गत अवगत कराया गया है कि प्रदेश के ग्रामीण क्षेत्र में अधिष्ठापित हैण्डपम्पों से प्राप्त पेयजल में आर्सेनिक की मात्रा निर्धारित सीमा से अधिक होने के दृष्टिगत मा० राष्ट्रीय हरित न्यायाधिकारण में ओ.ए० संख्या-384/2019 योजित है। मा० न्यायाधिकारण द्वारा दिनांक-11.09.2019 को आर्सेनिक की समस्या से प्रभावित बस्तियों में अधिष्ठापित हैण्डपम्पों को विघटित(Dismantle) करने हेतु निर्देशित किया गया है। उत्तर प्रदेश जल निगम द्वारा ग्रामीण क्षेत्र के हैण्डपम्पों के पेयजल का परीक्षण करते हुए आर्सेनिक प्रभावित बस्तियों का चिन्हीकरण किया गया है। वर्तमान में चिन्हीत बस्तियों की संख्या 1444 है। ग्रामीण क्षेत्र की उक्त बस्तियों में अधिष्ठापित हैण्डपम्पों को Dismantle किये जाने का कार्य जल निगम द्वारा किया जाना है।

अतः आपसे अनुरोध है कि कृपया प्रश्नगत प्रकरण में मा० न्यायाधिकारण द्वारा पारित आदेश के क्रम में जल निगम द्वारा ग्रामीण क्षेत्र के जिन बस्तियों में अधिष्ठापित हैण्डपम्पों को Dismantle किया जायेगा, उन बस्तियों में स्वच्छ पेयजल उपलब्ध कराने हेतु वैकल्पिक व्यवस्था कराने तथा स्वच्छ पेयजल उपलब्ध कराये जाने हेतु कार्ययोजना बनाकर आवश्यक कार्यवाही करने हेतु सम्बन्धित अधिकारी को निर्देशित करने का कष्ट करें। जनपदों द्वारा बनायी गयी कार्ययोजना की एक प्रति कृपया निदेशालय को भी उपलब्ध कराने का कष्ट करें।  
संलग्नक उपरोक्तानुसार।

भवदीय,

  
(राज कुमार)

अपर निदेशक(प्रशा०),  
पंचायतीराज, उ०प्र०।