Initial Environmental Examination

Project Number: 51308-008
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India: Uttarakhand Climate Resilient Power System Development Project

Appendices Part 3

Prepared by Power Transmission Corporation of Uttarakhand Limited and Uttarakhand Power Corporation Limited for the Asian Development Bank.

ENVIRONMENT MONITORING REPORT

"Environmental Monitoring of Existing UPCL & Baseline Data generation of proposed ADB funded project UTSDIP. Monitoring has been conducted as per CPCB Guideline to about 36 different location of Uttrakhand.

Period of Performance: May 2023 to June 2023

Submitted to:

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1. INTRODUCTION

Environmental monitoring is a tool to assess environmental conditions and trends, support policy development and its implementation, and develop information for reporting to national policymakers, international forums and the public. It examines the amount of harm or risk of injury that may be posed by the assessed entity and determines the types of Pollution being produced by looking at a broad range of locations, activities, and procedures. The information compiled from these factors to determine what changes would need to be installed for compliance.

Environmental monitoring refers to the tools and techniques designed to observe an environment, characterize its quality, and establish environmental parameters, for the purpose of accurately quantifying the impact an activity has on an environment.

1.1 Type of Environmental Monitoring

There are four types of environmental monitoring which can be conducted.

- **Air Monitoring** - Environmental data gathered using specialized observation tools, such as Handy samplers,Respirable Dust sampler etc.which combines emissions and topographical data to detect & predict concentration of air pollutants.
- **Water Monitoring**- Environmental sampling techniques include judgmental, simple random, stratified, systematic and grid, adaptive cluster, grab, and passive; semi-continuous and continuous environmental monitoring; remote sensing and environmental monitoring; and bio-monitoring are used to measure and monitor ranges for biological, chemical, radiological, microbiological parameters.
- **Noise Monitoring** - Noise monitoring entails long-term sound monitoring without the need for human interaction. There are two main types of sound monitoring: workplace monitoring and environmental noise monitoring, each depending on the location of the sound source.
- **Soil Monitoring**- Grab sampling (individual samples) and composite sampling (multiple samples) are used to monitor soil, set baselines, and detect threats such as acidification, biodiversity loss, compaction, contamination, erosion, organic material loss, salinization, and slope instability.

2. PROJECT DETAILS

2.1 Project Geography;

"Environmental Monitoring of Existing UPCL & Baseline Data generation of proposed ADB funded project UTSDIP. Monitoring has been conducted as per CPCB Guideline to about 36 different location of Uttrakhand.

2.2 Brief Details of the Project:

Baseline Environmental Monitoring for IEE Report **List of Components/ Locations**						
New SS UPCL						
S.No	Name of SS	GPS Coordinates	Location	**Air**	**Water**	**Noise**
1	Badhave 32 KV	Lat: 29.828409 Long: 80.1207	Badave, Pithoragarh Government Land, land transferred by DM (Revenue Dept.) Khata No: 173, Khasra No: 2094, 2095, 2096, 2097	-	-	-
2	Pankhu 32KV	Lat: 29.859768 Long: 80.071923	Pankhu, Pithoragarh Private land purchased by UPCL. (7 Owners Jeevan Chandra Pathak: 0.034 Ha Banshidhar Pathak: 0.041 Ha Pitamber Pathak: 0.041 Ha Bhuwan Chandra Pathan: 0.041 Ha Mahesh Chandra Pathak: 0.041 Ha Basant Ballav: 0.020 Ha Ganga Prasad Pathak: 0.021 Ha) Khata No: 018, Basra No: 7	-	-	-
3	132/11 KV, (2x5 MVA), Kaniya, Ramnagar, Haldwani		Near Sawaldya, Kaniya, Rammagar Govt. land (Khata 96, Khasra-72/3)	X	X GW	X
4	33/11 KV, (2 X 10 MVA), Near Collectorate, Rudrapur	Lat: 29.002046 Long: 79.408755	Behind Mandi Parishad Residential Complex, Rudrapur land Government land (UPCL has not received the allotment letter from District Magistrate.)	X	X GW	X
5	33/11 KV, (2 X 5 MVA), Bharauni, Sitarganj, Rudrapur	Lat: 28.994257 Long: 79.74355	Lamakhera, Bhaurauni, Nanakmatta Road, Sitarganj Government Land (as informed during consultation it was earlier Tribal-Tharu women land), acquired by the Govt. UPCL is yet to submit the land allotment letter from Government	X	X GW	X
6	Guniyal Gaon	Lat: 30.395467 Long: 78.068175	ChakSaliniwala, Guniyal Gaon, Dehradun	X	-	X
7	Suwakholi	Lat: 30.2640 Long: 78.0948 30.2639	Nalikalan, Suwakholi, Tehri Govt. land acquired by UPCL	X	-	X

		78.0947	Khata-62, Khasra-146Ka			

Existing SS UPCL Based on Audit Report					
SI. No.	**Name and GPS Coordinates of Substation**	**Air and Noise**	**Soil**	**Surface Water**	**Ground Water source in 50m**
1	Sahastradhara 30°19'54.50"N, 78°3'54.56"E	X 3m	-	X Rispana River – 70m	-
2	Hatibarakala 30°20'55.46"N, 78° 3'43.99"E	-	X	-	-
3	Sahiya 30°36'58.59"N, 77°52'19.64"E	X 2m	-	X Amlawa River – 60m	-
5	Rudrapur, Vikasnagar Dehradun 30°26'40.61"N, 77°51'39.91"E	X 25m	-	X Gona River - SS located in flood plain zone Moti River – 100m	X Nearest house – 25m has tube well, which is also tapped by SS
6	RamnagarDanda, Doiwala, Dehradun 30°13'54.79"N, 78°12'59.43"E	X Temple opposite to SS	-	X Bidalnath River – 400m	-
7	Lal Tappar, Doiwala, Dehradun 30° 7'27.50"N, 78° 9'22.91"E	X Labour hut - 3m	-	X Jakhan River- 140m	-
8	Tarikhet Ranikhet, Almora 29°36'59.78"N, 79°24'39.17"E	X 0m	-	-	-
9	Bajol Ranikhet, Almora 29°33'10.98"N, 79°28'40.21"E	-	X	X PatliRiver - 300m	-
10	LamgarahAlmora, Ranikhet 29°31'38.98"N, 79°45'37.05"E	X 40m	-	-	X handpump in Temple
11	Sairaghat Ranikhet, Almora 29°42'2.33"N, 79°49'34.40"E	-	-	X Jaigan River – 500m	-
12	KamalwaganjaHaldwani Rural 29°12'37.58"N, 79°27'53.36"E	X 0m	-	-	-
13	Transport NagarHaldwani Rural 29°11'32.46"N, 79°30'52.69"E	X 30m	-	X Teenpani Stream – 0m	-
14	PhoolchaurHaldwani Rural 29°10'57.69"N, 79°29'14.47"E	X 20m	X	-	-
15	GarampaniHaldwani Nainital 29°29'2.93"N, 79°28'41.09"E	X 2m	X	X Sipra River – 0m	X Handpump - 50m
16	Talla RamgarhHaldwani Nainital 29°27'6.35"N, 79°34'15.59"E	X 0m	-	X Ramgarh River- 10m	X Defunct Handpump -

					5m
17	SarghakhetMukteshwar, Nainital, Haldwani 29°26'21.63"N, 79°38'48.12"E	X 10m	-	-	X Bore well in hotel – 15m
18	Pines Nainital, Haldwani 29°23'8.12"N, 79°28'58.90"E	-	X	-	-
19	Matkota, Rudrapur 28°59'23.35"N, 79°24'2.65"E	X UPCL staff quarter with SS area, private residence- 60m	X	X Rainfed stream - along SS boundary	X Borewell inside SS
20	BhadaipuraRudraur-I 28°57'48.81"N, 79°24'27.78"E	X Adjacent to SS	X	-	X Handpump – inside SS
21	LalpurRudraur-I 28°55'41.74"N, 79°27'20.95"E	X 45m	X	X Pond-200m, Stream – adjacent to SS	X Handpump – inside SS and in school
22	Sitarganj, Rudrapur 28°55'35.29"N, 79°42'40.19"E	X 50m	X	-	-
23	JhankatKhatima, Rudrapur 28°56'31.88"N, 79°54'11.67"E	X 0m	X	X Stream-along SS boundary	X Handpump – inside SS
24	Kashipur 29°12'23.86"N, 78°58'1.30"E	X 0m	X	X Drona Sagar Lake -100m	X Two Submerssible pump in SS, handpumps in 3 residences (0-10m range)
25	Doraha, Bazpur 29° 7'57.53"N, 79° 7'12.52"E	X 5m	X	X Ganda Nalla/Stream – 100m	X 2 submersible pumps in SS
	Total Number of Samples	Air 20 nos. Noise 20x2 = 40 nos.	12	15	11

PTCUL Construction of new substations (A)

S.No	Name	GPS Coordinates	Location	Air	Water	Noise	Soil
1	220 KV Selaqui, Dehradun	30.361205 77.846294	SIIDCUL Plot No C1/2 Selaqui Industrial Area, Dehardun, SIDCUL	X	X River Aswa at 260m SW	X	-
2	Araghar, Dehradun	30.306322 78.051212	Araghar Dehradun, UPCL	X	-	X	X

3	132/33 KV Dhaulakhera, Nainital	29.132012 79.517796	Near Indian Oil depot, Bareilly Road, Dhaulakhera, Haldwani, UPCL SS premises	-	-	-	X
4	132/33 KV Khatima-II, US Nagar	28.96635 79.978653 28.906877 79.979025	KhatimaMelaghat road	X	X Adjacent	X	-
5	132 KV Substation Lohaghat, Champawat	29.394638 80.099148	Village & GP - Desli, Lohaghat Govt. Land,	-	-	-	-
6	220/132/33 KV Manglore, Haridwar	29.790116 77.848433	GidarJodda, Manglore, Private land acquired by PTCUL	-	-	-	-
7	400/220 KV Landhora	29.834468 77.942144	Sundari, Landhora, Roorkee	-	X Solani River 280m	-	-
8	132/33 KV Sarverkhera	29.219469 78.899413	Land yet not finalized, PTCUL at Babarkhera Village	X	X GW within the proposed site	X	-
9	IIP Harrawala in the Campus of existing 220 kV GIS SS Harrawala	30.260429 78.083022	IIP Campus, Harrawala Dehradun,	X	X GW within the proposed site	X	-
			Total	**5**	**5**	**5X2**	**2X2**

3. OBJECTIVES OF THE MONITORING

- To manage & minimize the impact an organizations activities have on an environment.
- To ensure the compliance with laws & regulations.
- To mitigate the risk of harmful effects on the natural environment.
- To protect the health of human beings.
- To advance the awareness of working in harmony with the environment that is growing or developing in coordination with it, thus affecting least to environment.

4. DATE/ PERIOD OF AUDIT

The monitoring was conducted from **May 2023 to June 2023.**

5. ENVIRONMENT MONITORING

6.1 AIR MONITORING

Monitoring stations were selected and 24 hourly monitoring was carried out for SO_2, NO_2, CO, PM_{10} and $PM_{2.5}$ at project site.

The sampling and analysis was carried out according to IS 5182.

6.2METHODOLOGY:

A) PROCEDURE OF PARTICULATE SAMPLING

1. Before sampling of ambient air, first of all environmental condition like weather condition, wind direction and ambient temperature of the sampling area should be monitored.
2. Expose each filer to the light source and inspect for pinholes, particles or for other imperfections.
3. Loosen the face plate wing nuts and remove the face plate.
4. Install a weighed and numbered filer in position with the rough side up.
5. Replace the faceplate and tighten the wing nuts to secure the rubber jacket against the filer edge.
6. Inertial jet and cyclonic inlets must have their seals in contact with the top of the face plate.
7. After that remove the cap of clean pre-weighed dust cup and attach at the bottom of the cyclone hopper to sampled SPM (more than 10µ size), to find out the conc. of NRSPM.
8. Set the timer for the desired start and stop time.
9. After turning on for 5 min. measure the exhaust pressure with Rota meter.
10. Read the flow rate corresponding to its exhaust pressure.
11. The specified length of sampling is commonly 8 hour or 24 hours.
12. After sampling is complete, record the final flow rate and the elapsed time in the same manner and determine the sample duration.
13. Remove the face plate by removing wing nuts.
14. Fold the filter in half-length wise, by handling it along its edge with the exposed side inward.
15. Remove the dust cup from the cyclone hopper and covered by the cap of the dust cup.

B) PROCEDURE FOR GASEOUS POLLUTANTS

1. For sampling of gaseous pollutants, the cold box assembly used.
2. Fill the ice and cold water in cold box to prevent the evaporation of absorbing solution.
3. In the cold box assembly, consist of standard impingers of 35 ml capacity, in which fill the absorbing solution to sampling of gaseous pollutants.
4. Fill the absorbing solution in impingers, according to the sampling of various gaseous.
5. Set the desired flow rate for gaseous sampling and check the flow rate of gases by the rotameter and note in the data sheet.
6. Finally this assembly attach with the ambient air sample, for the sampling of gaseous pollutants in which gaseous pollutants absorbs by the absorbing solution.

SAMPLING AND ANALYSIS OF PARTICULATE MATTER $PM_{2.5}$ & PM_{10} (GRAVIMETRIC METHOD)

1. Principle

An electrically powered air sampler draws ambient air at a constant air at a constant volumetric flow rate (16.7 1pm) maintained by a mass flow / volumetric flow controller coupled to a microprocessor into specially designed inertial particle-size separator (i.e. $PM_{2.5}$impactor or PM_{10}impactor) where the suspended particulate matter in the air $PM_{2.5}$ and PM_{10} size ranges is separated for collection on a 47 mm polytetrafluoroethylene (PTEE) filter over a specified sampling period.

Each filter is weighed before and after sample collection to determine the net gain due to the particulate matter. The mass concentration in the $PM_{2.5}$ & PM_{10} µm size ranges divided by the actual volume of air sampled, and is expressed in µg/ m^3. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate. In addition, the microprocessor calculates the average temperatures and pressure, total volumetric flow for the entire sample run time and the coefficient of variation of the flow rate.

2. Sitting Of Sampler And Requirements

The monitoring should be done at outside the zone of influence of sources located within the designated zone of representation for the monitoring site. Height of the inlet must be 3-10 m above the ground level. And at a suitable distance from any direct pollution source including traffic. Large nearby buildings and trees extending above the height of the monitor may present barriers or deposition surfaces for PM. Distance of the sampler to any air flow obstacle i.e. buildings, must be more than two times the height of the obstacle above the sampler.

There should be unrestricted airflow in three of four quadrants. Certain trees may also be sources of pm in the form of detritus, pollen, or insect parts. These can be avoided by located samplers by placing them > 20 m from nearby trees. If collocated sampling has to be performed the minimum distance between two Samplers should be 2 m.

- **Procedure of $PM_{2.5}$**

Set the instrument from $PM_{2.5}$ impector to APM-550 and also set the small size rod on impector 2.5 then set the hood .it is a complete setting. Collect the sample Collect the sample for 4 hrs. / 8 hrs. / 24 hrs. as per requirement. Start the sampler APM 550 then Take a initial totalizer timer reading and initial volume rate after that when end of monitoring then take final totalizer timer reading and final volume rate noted. Remove the membrane and preserve in polythene bag or a plastic box (sample should be kept at a clean and dry place). Checking the leak check after and before use of APM-550 and calculate of concentration of PM_{10}.

- **Procedure of PM_{10}**

Remove the impector 2.5 and small size rod after that Set the instrument long size of rod then set the hood for collect the PM_{10} size.

3. Apparatus and Materials

- Used FPS APM 550 sampler.
- Certified Standards for Pressure and temperature (optional)
- Digital timer/stopwatch.
- 47 mm Filter
- 37 mm dia filter paper for impector $PM_{2.5.}$
- Filter support cassettes and covers.
- Relative Humidity/ Temperature recorder.

- Plastic Petri-slide filters containers (Filter Cassette).

- Zip-lock plastic bags, 6"× 9".
- Filter equilibration cabinets.
- Impactor oil/ grease.

4. Filter Inspection And Conditioning Of Filter Papers

Filter papers selected for different analytical objectives should be conditioned by following steps:

- Inspect all the filter papers for holes or cracks. Reject, if any deformity is found.
- Note down the batch/lot in log sheet.
- Label all the filters following a general lab coding technique, which should be unique to represent a sample.
- Put the marked filters in Petri dishes.
- Use always proper (blunt) tweezers/forceps (made of non-reactive material) to handle the filter papers in lab and field as well.
- Prepare a sample-tracking sheet for each filter paper or a batch of filter paper.

5. Field Sampling

On the field Data Log, fill in the top portion of the form including: the date/time of visit, the site identification, sampler identification, site name, filter ID number, sample start and stop dates and times, and field operator initials.

- Set the instruments APM 550.
- Record all maintenance activities in the field log book; include time, date, and any concerns that might affect the quality of the sample.
- Remove the filter to be installed from its protective filter cassette carrier.
- Fix the filter following manufacturer's instructions into place against the bottom of the WINS impactor.
- Start Sampling run.
- Remove the filter carrier from the filter holder.
- Place the filter carrier in the filter cassette case.

6. Calculation And Reporting Of Mass Concentrations

The total volume of ambient air passing through the sampler (V) in cubic meters at the actual temperatures and pressures measured during sampling. Calculation as below:

V = IVR - FVR

Where,

- V = total sample value (m^3)
- IVR = records the initial volume reading from start of the monitoring.
- FVR = records the final volume reading from end of the monitoring.
- **For Particulate Matter $_{2.5}$**

$$PM_{2.5}\ (\mu g/m^3) = \frac{(Mf - Mi)X1000000}{V}$$

- **For Particulate Matter $_{10}$**

$$PM_{10}\ (\mu g/m^3) = \frac{(Mf - Mi)X1000000}{V}$$

Where

- Mf = final mass of the conditioned filter after sample collection (g)
- Mi = initial mass of the conditioned filter before sample collection (g)
- 10^6 = unit conversion factor for grams (g) to micrograms (µg)

7. Reporting

Data reporting should be done in prescribed Format. The Format shall contain all information including calibration. The data sheet must be accompanied by Sample Tracking sheet.

8. References

- $PM_{2.5}$ Gravimetric Analysis – Revision 7, August 14, 2003, Page 2 of 24 RTI (Research Triangle Institute, US).
- IS 5182 Part 23 Method of Measurement of Air pollution: Respirable Suspended Particulate matter (PM_{10}) cyclonic flow technique.

SAMPLING AND ANALYSIS OF SULPHUR DIOXIDE

(IMPROVED WEST AND GEAKEMETHOD)

1. Principle Of The Method

Improved West &Gaeke Method (IS 5182 Part 2 Measurement of Air Pollution: Sulphur dioxide).Sulphur dioxide from air is absorbed in a solution of potassium tetrachloro-mercurate (TCM). A dichlorosulphitomercurate complex which resists oxidation by the oxygen in the air is formed. The complex is made to react with para-rosaniline and formaldehyde to form the intensely colored para-rosaniline methyl sulphonic acid. The absorbance of the solution is measured by double beam spectrophotometer (systronics model no. -2203).

2. Range And Sensitivity

Concentration of sulphur dioxide in the range of 25 to 1025 µg/ m^3 can be measured this method. Concentration below 25 µg/ m^3 can be measured by sampling large volume of air.

3. Instrument/Equipment

- Analytical balance
- RDS APM 460 BL
- Calibrated flow-measuring device to control the air flow from 0.2 to 1 1/min.
- Glass impinger
- Spectrophotometer: double beam spectrophotometer (Systronics model no. 2203).
- Glass wares

4. Reagents/ Chemicals

- Distilled water
- Mercuric chloride
- Potassium chloride / Sodium chloride
- EDTA di-sodium salt
- Sulphamic Acid (0.6%)
- Formaldehyde (0.2%)
- Pararosaniline Solution
- Stock Iodine Solution (0.1 N)
- Starch indicator Solution
- Potassium iodate
- Stock Sodium Thiosulfate Solution (0.1 N)
- Sodium Sulphite.

5. Preparation Of Reagents

- **Absorbing Reagent**, (0.04 M) Potassium Tetrochloromercurate (TCM) – Dissolve 10.86 g mercuric chloride, 0.066 g EDTA, and 6.0 g potassium chloride in water and bring to the mark in a 1 liter volumetric flask.

Caution: highly poisonous if spilled on skin, flush off with water immediately.

The pH of this reagent should be approximately 4.0 but, it has been shown that there is no appreciable difference in collection efficiency over the range of pH 5 to pH 3.

The absorbing reagent is normally stable for six months refrigerator. If, a precipitate forms, discard the reagent after recovering the mercury.

- **Sulphamic Acid** (0.6%):Dissolve 0.6 g sulphamic acid in 100 ml distilled water.
Prepare fresh daily.
- **Formaldehyde** (0.2%):Dilute 2.5 ml formaldehyde solution (36-38%) to 500 ml with distilled water. Prepare fresh daily.
- **Purified Pararosaniline Stock Solution** (0.2% Nominal):Dissolve 0.500 gm of specially purified pararosaniline chloride (PRA) in 100 ml of distilled water. Keep for 2 days (48 hours) and filter the solution.Stable for 3 months in refrigerator.
- **Working Pararosaniline Solution:**5 ml of stock PRA is taken in a 250 ml volumetric flask, Add 7.5 ml concentrate Hcl and make up to 125 ml volume with distilled water.

6. **PreparationOf Chemical For Calibration Curve:**

- **Stock Iodine Solution** (0.1 N) :Place 12.7 g iodine in a 250 ml beaker, add 40 g potassium iodide and 25 ml water. Stir until all is dissolved, then dilute to 1 liter with distilled water.
- **Iodine Solution** (0.01) :Prepare approximately 0.01 N iodine solutions by diluting 50 ml of stock solution to 500 ml with distilled water.
- **Starch indicator Solution:**Triturate 0.4 gm soluble starch and 0.002 g mercuric iodide preservative with little water and add the paste slowly to 200 ml boiling water. Continue boiling until the solution is clear, cool, and transfer to a glass - stoppered bottle.
- **Stock Sodium Thiosulfate Solution** (0.1 N): Prepare a stock solution a by placing 25 g sodium thiosulfate pentahydrate in a beaker, add 0.1 g sodium carbonate and dissolve using boiled, cooled distilled water making the solution up to a final volume of 1 liter.
Allow the solution to stand one day before standardizing.

7. **Standardisation of Stock Sodium Thiosulfate Solution** (0.1 N):To standardize accurately weigh to the nearest 0.1 mg, 1.5 g primary standard potassium iodate dried at 180^0 C, dissolve, and dilute to volume in a 500 ml volumetric flask. Take 50 ml of iodate solution by pipette into an iodine flask. Add 2 g potassium iodide and 10 ml of N hydrochloric acid and stopper the flask. After 5 min, titrate with stock thiosulfate solution to a pale yellow. Add 5 ml starch indicator solution and continue the titration until the blue colour disappears. Calculate the normality of the stock solution. Laboratory CRM can also be used**.**

Calculation: $\mathbf{N} = \frac{\mathbf{Mx2.80}}{\mathbf{V}}$

Where:

- V= volume in ml of sodium thiosulphate used.
- M= mass in g of potassium iodate.

- **Sodium Thiosulfate Titrant** (0.01 N) :Dilute 100 ml of the stock thiosulphate solution to 1 liter with freshly boiled and cooled distilled water.

8. **Standardized Sodium Sulphite Solution For Preparation Of Working Sulphate(0.01N):** TCM Solution- Dissolve 0.30 g sodium metabisulphite ($NaHSO_3$) or 0.40 g sodium sulphite (Na_2SO_3) in 500 ml of freshly boiled, cooled, distilled water of the highest purity to minimize this instability. This solution contains the equivalent of 320-400 µg/ml of SO_2.
9. **Calibration:** The actual concentration of the suphite solution is determined by adding excess iodine and back titration with standard sodium thiosulfate solution. To back-titrate, measure, by pipette, 50 ml of the 0.01 N iodine solutions into each of two 500 ml iodine flasks A and B. To flask B (sample) measure 25 ml sulphite solution by pipette. Stopper the flasks and allow reacting for 5 minutes. Prepare the working sulphite-TCM solution at the same time iodine solution is added to the flasks. By means of a burette containing standardized 0.01 N thiosulfate, titrate each flask in turn to a pale yellow. Then add 5 ml starch solution and continue the titration until the blue color disappears.

Then calculate the equivalent of 320-400 µg/ml of SO_2

Calculation:

$$\mathbf{C1 = \frac{(V1 - V2)xNx32000}{25}}$$

Where:

- C1=concentration of SO2 solution in µg/ml.
- V1=volume in ml of thiosulphate used for blank; ml.
- V2= volume in ml of thiosulphate used for sample; ml.
- N= normality of thiosulphate.
- 32000=milli equivalent weight SO_2; µg
- 25= volume of standard sulphite solution; ml

10. **Working Sodium Sulphite Solution -TCM Solution:**Measure 2 ml of the standardized Sodium SulphiteSolutioninto a 100 ml volumetric flask by pipette and bring to mark with 0.04 TCM. Calculate the concentration of sulphur dioxide per mille liter. This solution is stable for 30 days if kept in the refrigerator at 5^0 C. If not kept at 5^0C, prepare fresh daily. **Alsoused the laboratory CRM.**

    After that calculate concentration of SO2 in µg/ml in ml.

$$\mathbf{C = C1x0.02}$$

    Where ;

- C= concentration of SO2 solution in µg/ml in ml.
- C1=concentration of SO2 solution in µg/ml.
- 0.02=dilution factor.

11. **Preparation of Standards:**Measure 0.5 ml, 1.0 ml, 1.5 ml, 2.0 ml, 2.5 ml, 3.0 ml, 3.5 ml and 4.0 ml of working sulphite solution and makeup 10 ml from TCM solution in 25 ml volumetric flask. Then Add 1 ml 0.6% sulphamic acid and allow reacting for 10 minutes to destroy the nitrite resulting from oxides of nitrogen. Add 2 ml of 0.2% formaldehyde solution and 5 ml working pararosaniline solution and make up to 25 ml with distilled water. A reagent blank with 10 ml absorbing solution is also prepared. Read the absorbance of each standard and reagent blank.
12. **Standard Curve:**Plot a curve absorbance (Y axis) versus concentration (X axis). Draw a line of best fit and determine the slope. The reciprocal of slope gives the calibration factor (CF).
13. **Sampling:**Place 30 ml of absorbing solution an impinger and sampling for 24 hour at the flow rate of 0.2 L/min. After sampling measure the volume of sample and transfer to a sample storage bottle.

    Analysis: Replace any water lost by evaporation during sampling by adding distilled water up to the calibration mark on the absorber. Mix thoroughly, pipette out 10 ml of the collected sample into a 25 ml volumetric flask. Add 1 ml 0.6% sulphamic acid and allow reacting for 10 minutes to destroy the nitrite resulting from oxides of nitrogen. Add 2ml of 0.2% formaldehyde solution and 5 ml working pararosaniline solution and make up to 25 ml with distilled water. Prepare a blank in the same manner using 10 ml of unexposed absorbing reagent TCM. After 30 min color development interval and before 60 minutes, measure and record the absorbance of samples and reagent blank at 560 nm. Use distilled water; not the reagent blank, as the optical reference.

    Calculation, Concentration Of SO_2(µg/m³):

$$\mathbf{C\ SO_2\ (\mu g/m^3) := \frac{(As - Ab)XCFX1000XVs}{VaXVt}}$$

Where:

- C (SO_2) = Concentration of Sulpher dioxide, µg/m³
- As = Absorbance of sample
- A_b = Absorbance of reagent blank
- CF = Calibration factor
- Va = Volume of air sampled, l
- Vs = Volume of sample, ml
- Vt = Volume of aliquot taken for analysis, ml
- 1000= conversion factor l to m^3

14. Reference :

IS 5182 Part 2 Method of Measurement of Air Pollution: Sulphurdioxide.

SAMPLING AND ANALYSIS OF NITROGEN DIOXIDE (MODIFIED JACOB AND HOCHHEISER METHOD)

1. Principle Of The Method

Modified Jacobs &Hochheiser method (IS 5182 Part 6 Methods for measurement of Air Pollution: Oxides of nitrogen). The concentration of nitrite ion (NO_2) produced during sampling is determined calorimetrically by reacting the nitrite ion with phosphoric acid, sulfanilamide, and N-(1-naphthyl)-ethylenediaminedihydrochloride (NEDA) and measuring the absorbance of the highly colored azo-dye at 540 nm.

2. Range And Sensitivity

Concentration of nitrogen dioxide in the range of 6 to 750 µg/ m^3 can be measured this method.

3. Instrument/Equipment

- Analytical balance
- RDS APM 460 BL
- Calibrated flow-measuring device to control the air flow from 0.2 to 1 1/min.
- Glass impinger
- Spectrophotometer: double beam spectrophotometer (systronics model no. -2203)
- Glass wares.

4. Reagents/Chemicals

- Distilled water
- Sodium hydroxide
- Sodium Arsenate
- Sulphanilamide
- N-(1-Naphthyl)-ethylenediamine Di-hydrochloride (NEDA)
- Hydrogen Peroxide-30%
- Phosphoric acid- 85%
- Sodium nitrite
- Sodium nitrite

5. Preparation Of Reagent

- **Absorbing 0.01N NaOH solution:**Dissolve 4.0 g o sodium hydroxide in distilled water, add 1.0 g of sodium Arsenate , and dilute to 1,000 ml with distalled water.
- **Sulphanilamide Solution:**Dissolve 20 g of sulphanilamide in 700 ml of distilled water. Add, with mixing, 50 ml of 85% phosphoric acid and dilute to 1,000 ml. This solution is stable for one month, if refrigerated.

- **N-(1-Naphthyl)-ethylenediamine Di-hydrochloride** (NEDA):A 1% aqueous solution should have only one absorption peak at 320 nm over the range of 260-400 nm. NEDA showing more than absorption peak over this range is impure and should not be used.

- **NEDA Solution:**Dissolve 0.5 g of NEDA in 500 ml of distilled water. This solution is stable for one month, if refrigerated and protected from light.
- **Hydrogen Peroxide Solution:**Dilute 0.2 ml of 30% hydrogen Peroxide to 250 ml with distilled water. This solution may be used for one month, if, refrigerated and protected from light.

6. **Chemical Preparation For Calibration Curve:**

- **Sodium nitrite**- Assay of 97% $NaNO_2$ or greater.
- **Stock Sodium Nitrite solution** (1000 µg NO_2/ml): Dissolve 1.500 gm of desiccated sodium nitrite in distilled water and dilute to 1000 ml.Also used the laboratory CRM.
- **Sodium Nitrite solution** (10 µg NO_2/ml):Pipette 5 ml of the stock sodium nitrite solution (1000 µg NO_2/ml) in 500 ml of distilled water. Prepare fresh daily.
- **Sodium Nitrite solution** (1 µg NO_2/ml):Pipette 25 ml of the sodium nitrite solution (10 µg NO_2/ml) in 250 ml of distilled water. Prepare fresh daily.

7. **Preparation of Standards:**Pipette 1, 2, 3,4,5,6 and 7 ml of working standard solution in to 50 ml volumetric flask. Fill to 20 ml mark with absorbing solution. A reagent blank with 10 ml absorbing solution is also prepared. Add reagents to each volumetric flask as in the procedure for analysis. Read the absorbance of each standard and reagent blank against distilled water reference.
8. **Standard Curve:**Plot a curve absorbance (Y axis) versus concentration (X axis). Draw a line of best fit and determine the slope. The reciprocal of slope gives the calibration factor (CF).
9. **Sampling:**Place 30 ml of absorbing solution an impinger and sampling for 24 hour at the flow rate of 0.2 L/min. After sampling measure the volume of sample and transfer to a sample storage bottle.
10. **Analysis:**Replace any water lost by evaporation during sampling by adding distilled water up to the calibration mark on the absorber, mix thoroughly. Pipette out 10 ml of the collected sample into a 50 ml volumetric flask. Pipette in 1 ml of hydrogen peroxide solution, 10 ml of sulphanilamide solution, and 1.4 ml of NEDA solution, with thorough mixing after the addition of each reagent and make up to 50 ml with distilled water. Prepare a blank in the same manner using 10 ml of unexposed absorbing reagent. After a 10 ml colour development interval, measure and record the absorbance of samples and regent blank at 540 nm.Use distilled water; not he reagent blank, as the optical reference. Samples with an absorbance greater than 1.0 must be re-analyzed after diluting an aliquot of the collected samples with an equal quantity of unexposed absorbing reagent.
11. **Calculation**

$$C\ (NO2 \mu g/m^3) = \frac{(As-Ab)XCFX1000XVs}{VaXVtX0.82}$$

Where,

- C NO2 = Concentration of Nitrogen dioxide, µg/m³
- As = Absorbance of sample
- Ab = Absorbance of reagent blank
- CF = Calibration factor
- Va = Volume of air sampled,l
- Vs = Volume of sample, ml
- Vt = Volume of aliquot taken for analysis, ml
- 1000= conversion factore l to m^3
- 0.82 = Sampling efficiency

12. **Reference**

IS 5182 Part 6 Methods for Measurement of Air Pollution: Oxides of Nitrogen.

SAMPLING AND ANALYSIS FOR CORBON MONOOXIDE (GCMETHOD)

- **PURPOSE:**For the determination of Carbon Mono oxide in air by GC - Nucon
- **EQUIPMENT AND APPARATUS USED:**Gas chromatograph Flame Ionisation Detector (with methaniser)

1. **Range And Sensitivity :**Concentration of carbon monoxide in the range of 02 to 200ppm can be measured by GC Nucon.
   - **CALCULATION**

Analyte (ppm) = Area of Sample x concentration of standard x sample dilution

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Area of standard x volume of air passed

Table 1

Ambient air quality monitoring

Observations:

Name & Address of Customer:	**Report No:**	550723000002978F
M/s-Kashipur Sarverkhera	**Reporting Date:**	31/05/2023
	Receipt Date:	25/05/2023
	Period of Testing:	25/05/2023-31/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by	: Lab Representative
Sampling Location	: Diamond Factor (Sarverkhera)
Instrument Used	: RDS with PM $_{2.5}$ Attachment
Instrument Code	: ECON/RDS/03
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 23/05/2023 to 24/05/2023
Time of Monitoring	: 01:11 PM to 01:11 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max. 31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: IS-5182
Parameters Required	: As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	55.3	$\mu g/m^3$	100
2.	Particulate Matter (PM $_{2.5}$)	IS:5182 (P-24):2019	30.7	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	14.3	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	25.0	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.75	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550723000002997F
M/s.Near Collectorate Rudurapur	Reporting Date:	31/05/2023
	Receipt Date:	26/05/2023
	Period of Testing:	26/05/2023-31/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : BehindMandiParishadResidentialComplex
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 24/05/2023 to 25/05/2023
Time of Monitoring : 02:15 PM to 02:15 PM
Ambient Temperature (^{0}C) : Min.22.00, Max. 32.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	48.6	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24):2019	26.3	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	13.0	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	22.6	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.50	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550723000003008F
M/s.Bharauni Sitarganj Rudurpur	Reporting Date	31/05/2023
	Receipt Date:	27/05/2023
	Period of Testing:	27/05/2023-31/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Lamakhera Bhaurauni,Nanakmatta Road
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 25/05/2023 to 26/05/2023
Time of Monitoring : 11:52AM to 11:52 AM
Ambient Temperature (^{0}C) : Min.21.00, Max. 31.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	50.4	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24):2019	31.9	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	12.3	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	21.8	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.70	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550723000003015F
M/s-Khatima II US Nagar.	Reporting Date:	31/05/2023
	Receipt Date:	27/05/2023
	Period of Testing:	27/05/2023-31/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION:AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : KhatimaMelaghat Road
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 25/05/2023 to 26/05/2023
Time of Monitoring : 05:10 PM to 05:10 PM
Ambient Temperature (^{0}C) : Min.20.00, Max. 30.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	59.0	$\mu g/m^3$	100
2.	Particulate Matter (PM $_{2.5}$)	IS:5182 (P-24):2019	35.2	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	16.0	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	24.2	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.80	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550723000003019F
M/s.ChampawatLohaghat.	Reporting Date:	03/06/2023
	Receipt Date:	29/05/2023
	Period of Testing:	29/05/2023-03/06/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Village & GP-Desil,LohaghatGovt.Land
Instrument Used : RDS with $PM_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 26/05/2023 to 27/05/2023
Time of Monitoring : 11:55AM to 11:55AM
Ambient Temperature (^0C) : Min.21.00, Max. 31.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	57.3	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24):2019	31.8	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	13.6	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	23.4	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.78	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550723000003046F
M/s.Dhaulakhera,Nainital	Reporting Date:	03/06/2023
	Receipt Date:	31/05/2023
	Period of Testing:	31/05/2023-03/06/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Near IndianDepot,Bareilly Road
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 29/05/2023 to 30/05/2023
Time of Monitoring : 12.10 PM to 12:10 PM
Ambient Temperature (^{0}C) : Min.21.00, Max. 31.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	60.3	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24):2019	34.0	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	16.3	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	27.4	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.87	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550723000003049F
M/s-KaniyaRamnagarHaldawani	Reporting Date:	05/06/2023
	Receipt Date:	01/06/2023
	Period of Testing:	01/06/2023-01/06/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Near Sawaldya,KaniyaRamnagar
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 30/05/2023 to 31/05/2023
Time of Monitoring : 11:13 PM to 11:13 PM
Ambient Temperature (^{0}C) : Min.21.00, Max. 31.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23):2006, RA2017	58.1	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24):2019	31.6	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001,RA2017	13.0	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006,RA2017	21.9	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10):1999 RA 2019	0.60	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550722000002461F
M/s- Hathibarakala	Reporting Date:	17/05/2023
	Receipt Date:	10/05/2023
	Period of Testing:	11/05/2023-17/05/2023
	Format No:	7.8-F-01
	Party Reference N	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by	: Lab Representative
Sampling Location	: Office Area (Hathibarakala)
Instrument Used	: RDS with PM $_{2.5}$ Attachment
Instrument Code	: ECON/RDS/03
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 09/05/2023 to 10/05/2023
Time of Monitoring	: 12:40 PM to 12:40 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max. 31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: IS-5182
Parameters Required	: As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23), 2006, RA2017, (Cyclonic Method)	72.9	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24), 2019, (Gravimetric method)	48.4	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001, RA2017	14.2	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006, RA2017	28.4	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10),1999 RA 2019	0.80	mg/m^3	4

End of Report

Name & Address of Client:	Report No:	550723000002491F
M/s- Laltapper Doiwala	**Reporting Date:**	17/05/2023
.	**Receipt Date:**	11/05/2023
	Period of Testing:	12-17/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Labour Hut
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/02
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 10/05/2023 to 11/05/2023
Time of Monitoring : 12:40 PM to 12:40 PM
Ambient Temperature (^{0}C) : Min.10.00, Max. 20.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10})	IS:5182 (P-23), 2006, RA2017, (Cyclonic Method)	74.8	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24), 2019, (Gravimetric method)	46.6	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001, RA2017	13.0	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006, RA2017	22.8	$\mu g/m^3$	80
6.	Carbon Monoxide (CO)	IS:5182 (P-10),1999 RA 2019	0.74	mg/m^3	4

End of Report

Name & Address of Client:	Report No:	550723000002592F
M/s- Landhora Roorkee	Reporting Date:	20/05/2023
	Receipt Date:	13/05/2023
	Period of Testing:	15-20/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Sundari Landhora Roorkee
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/01
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 12/05/2023 to 13/05/2023
Time of Monitoring : 01:31 PM to 01:31 PM
Ambient Temperature (^{0}C) : Min.10.00, Max. 20.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10})	IS:5182 (P-23), 2006, RA2017, (Cyclonic Method)	73.8	$\mu g/m^3$	100
2.	Particulate Matter (PM $_{2.5}$)	IS:5182 (P-24), 2019, (Gravimetric method)	42.5	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001, RA2017	15.2	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006, RA2017	20.4	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10),1999 RA 2019	0.79	mg/m^3	4

End of Report

Name & Address of Client:	Report No:	550723000002590F
M/s- Manglor Haridwar	Reporting Date:	20/05/2023
	Receipt Date:	13/05/2023
	Period of Testing:	15-20/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by	: Lab Representative
Sampling Location	: Gidar Jodda Mangalor Private Land by pitcul
Instrument Used	: RDS with PM $_{2.5}$ Attachment
Instrument Code	: ECON/RDS/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 12/05/2023 to 13/05/2023
Time of Monitoring	: 02:17 PM to 02:17 PM
Ambient Temperature (^{0}C)	: Min.10.00, Max. 20.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: IS-5182
Parameters Required	: As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10})	IS:5182 (P-23), 2006, RA2017, (Cyclonic Method)	76.3	$\mu g/m^3$	100
2.	Particulate Matter (PM $_{2.5}$)	IS:5182 (P-24), 2019, (Gravimetric method)	41.9	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001, RA2017	17.2	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006, RA2017	21.4	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10),1999 RA 2019	0.72	mg/m^3	4

End of Report

Name & Address of Client:	Report No:	550723000002489F
M/s- Ramnagar Donda Doiwala .	**Reporting Date:**	17/05/2023
	Receipt Date:	11/05/2023
	Period of Testing:	12-17/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by	: Lab Representative
Sampling Location	: Temple Opposite to SS
Instrument Used	: RDS with PM $_{2.5}$ Attachment
Instrument Code	: ECON/RDS/02
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 10/05/2023 to 11/05/2023
Time of Monitoring	: 12:11 PM to 12:11 PM
Ambient Temperature (^{0}C)	: Min.10.00, Max. 20.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: IS-5182
Parameters Required	: As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10})	IS:5182 (P-23), 2006, RA2017, (Cyclonic Method)	73.8	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24), 2019, (Gravimetric method)	44.6	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001, RA2017	12.8	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006, RA2017	22.0	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10),1999 RA 2019	0.76	mg/m^3	4

End of Report

Name & Address of Customer:	Report No:	550722000002464F
M/s- Sahashtradhara	Reporting Date:	17/05/2023
	Receipt Date:	10/05/2023
	Period of Testing:	11/05/2023-17/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT AIR QUALITY MONITORING

General Information

Sample Collected by : Lab Representative
Sampling Location : Office Area (Sahashtradhara)
Instrument Used : RDS with PM $_{2.5}$ Attachment
Instrument Code : ECON/RDS/03
Instrument Calibration Status : Calibrated
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 09/05/2023 to 10/05/2023
Time of Monitoring : 01:12 PM to 01:12 PM
Ambient Temperature (^{0}C) : Min.21.00, Max. 31.00
Surrounding activity : Human & Vehicular Activities
Scope of Monitoring : Regulatory Requirement
Control measure if any : No
Sampling & Analysis Protocol : IS-5182
Parameters Required : As per Work Order

TEST RESULTS

S. No.	Parameters	Test Methods	Test Results	Units	NAAQS#
1.	Particulate Matter (PM_{10}	IS:5182 (P-23), 2006, RA2017, (Cyclonic Method)	52.8	$\mu g/m^3$	100
2.	Particulate Matter ($PM_{2.5}$)	IS:5182 (P-24), 2019, (Gravimetric method)	31.5	$\mu g/m^3$	60
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2):2001, RA2017	13.6	$\mu g/m^3$	80
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6):2006, RA2017	27.9	$\mu g/m^3$	80
5.	Carbon Monoxide (CO)	IS:5182 (P-10),1999 RA 2019	0.87	mg/m^3	4

NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i) 16.

End of Report

6.2 NOISE MONITORING

Noise or sound level monitoring or measurement is a process to measure the magnitude of Noise in industries and residential area. Data collected from Noise level monitoring & Testing helps us to understand trends and ction can be taken to reduce noise pollution. Noise pollution is Low or High-frequency sound that can cause/harm the activity of human life. It can be caused by various industrial Machines, Motor Vehicles and Craft etc. **Noise Pollution Monitoring** process is a part of Environmental Monitoring & Testing as noise pollution is also increasing exponentially in recent years.

Sound/Noise level meter equipment measures noise pollution. It consists of several parts, mainly Microphone, Pre-amplifier, frequency weighting, Processor, Display System, communication System and Power Supply. dB(A) Leq denotes the time-weighted average of the level of sound in decibel on scale A which is relatable to human hearing.A "**decibel**" is a unit in noise measurement. "A", in **dB (A) Leq**, denotes the frequency weighting in the **measurement of noise** and corresponds to frequency response characteristics of the human ear.Leq: It is an energy mean of the noise level over a specified period.Noise level Survey schedule is planned in such a way that it covers the noise generation by normal daytime activities i.e. from 08:00 am to 10:00 pm and a part of nighttime activities i.e. 10:00 pm to 12:00 am (at night).Due to the increase in noise pollution in recent years, it is recommended to conduct a **measurement of noise pollution** program on company premises.

The method used for Sampling & Analysis was according to CPCB Guideline & IS 9876
Four monitoring stations were selected and 24 hourly monitoring was carried out at project site.

Table 2

NOISE MONITORING

Observations:

Name & Address of Client:	**Report No:**	550723000002979F
M/s.Kashipur Sarverkhera	**Reporting Date:**	31/05/2023
	Receipt Date:	25/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Dimond Factory (Sarverkhera)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 23/05/2023 to 24/05/2023
Time of Monitoring	: 01:11 PM to 01:11 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	62.1	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	49.6	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000002981F
M/s.Doraha Bazpur	Reporting Date:	31/05/2023
	Receipt Date:	25/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area (Doraha Bazpur)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 23/05/2023 to 24/05/2023
Time of Monitoring	: 04:41 PM to 04:41 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	60.3	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	50.7	dB	**Commercial Area-**	**65**	**55**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000002985F
M/s.Kashipur	Reporting Date:	31/05/2023
	Receipt Date:	25/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area (Kashipur)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 23/05/2023 to 24/05/2023
Time of Monitoring	: 02:40 PM to 02:40 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.		-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	62.8	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	52.1	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000002289F
M/s.Matkota Rudurpur.	Reporting Date:	31/05/2023
	Receipt Date:	26/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Staff Quarter (Matkota)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 24/05/2023 to 25/05/2023
Time of Monitoring	: 10:30AM to 10:30AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	61.8	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	52.0	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000002993F
M/s.Bhadaipura Rudupur	Reporting Date:	31/05/2023
	Receipt Date:	26/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area (Bhadaipura)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 24/05/2023 to 25/05/2023
Time of Monitoring	: 12:09 PM to 12:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	62.5	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	49.3	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000002997F
M/s.Near Collectarate Rudrapur	Reporting Date:	31/05/2023
	Receipt Date:	26/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Behind Mandir Parishad Rudurpur
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 24/05/2023 to 25/05/2023
Time of Monitoring	: 02:15 PM to 02:15 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	59.6	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	48.1	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003001F
M/s.Lalpur Rudrapur	Reporting Date:	31/05/2023
	Receipt Date:	26/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCLOffice &Yard Area(Lalpur Rudurpur
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 09/05/2023 to 10/05/2023
Time of Monitoring	: 01:09 PM to 01:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	61.3	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	50.7	dB	**Commercial Area-**	**65**	**55**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000003005F
M/s.Sitarganj	Reporting Date:	31/05/2023
	Receipt Date:	27/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office& Yard Area(Sitarganj)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 25/05/2023 to 26/05/2023
Time of Monitoring	: 10:45AM to 10:45AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	59.3	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	44.6	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003008F
M/s.Bharuni Sitarganj	Reporting Date	31/05/2023
	Receipt Date:	27/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Lamakhera Bharuni Nanakmatta Road
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 25/05/2023 to 26/05/2023
Time of Monitoring	: 11:53AM to 11:53AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	57.6	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	43.1	dB	**Commercial Area-**	**65**	**55**

***End of Report

Name & Address of Client:	Report No.:	550723000003011F
M/s.Jhankat Khatima	Reporting Date:	31/05/2023
	Receipt Date:	27/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Jhankat Khatima)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 09/05/2023 to 10/05/2023
Time of Monitoring	: 01:09 PM to 01:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	58.0	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) **55** (Night Time)	45.3	dB	**Commercial Area-**	**65**	

*****End of Report*****

Name & Address of Client:	Report No.:	550723000003015F
M/s. Khatima II US Nagar	Reporting Date:	31/05/2023
	Receipt Date:	27/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Khatima Melaghat Road
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 25/05/2023 to 26/05/2023
Time of Monitoring	: 05:09 PM to 05:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	58.9	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	46.3	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003020F
M/s.Champawat	Reporting Date:	03/06/2023
	Receipt Date:	29/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Village &GP Desli Lohaghat Govt Land
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 26/05/2023 to 27/05/2023
Time of Monitoring	: 11:50 AM to 11:50 AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	56.1	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	41.3	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003021F
M/s.Bajol Almora	Reporting Date:	31/05/2023
	Receipt Date:	29/05/2023
	Format No:	7.8-F-01
	Party Reference:	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Omt Temple Inside
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 27/05/2023 to 28/05/2023
Time of Monitoring	: 03:50 PM to 03:50 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	57.6	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	42.9	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003024F
M/s.Lamgrah Almora	Reporting Date:	31/05/2023
	Receipt Date:	29/05/2023
	Format No:	7.8-F-01
	Party Reference:	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Lamgrah Almora)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 27/05/2023 to 28/05/2023
Time of Monitoring	: 10:35AM to 10:35AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	59.2	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	46.0	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003027F
M/s.Tarikhet Almora	Reporting Date:	31/05/2023
	Receipt Date:	29/05/2023
	Format No:	7.8-F-01
	Party Reference:	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area Tarikhet Almora
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 27/05/2023 to 28/05/2023
Time of Monitoring	: 02:18 PM to 02:18 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	55.4	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	42.9	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003029F
M/s.Garampani Haldwani	Reporting Date:	31/05/2023
	Receipt Date:	30/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Garampani)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 27/05/2023 to 28/05/2023
Time of Monitoring	: 05:40 PM to 05:40 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	57.8	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	47.4	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003033F
M/s.Talla Ramgarh	Reporting Date	31/05/2023
	Receipt Date:	30/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Talla Ramghar)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 28/05/2023 to 29/05/2023
Time of Monitoring	: 12:15 PM to 12:15 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	58.2	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	45.1	dB	**Commercial Area-**	**65**	**55**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000003036F
M/s.Sarghakhet Mukteshwer	Reporting Date:	31/05/2023
	Receipt Date:	30/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Mukteshwer)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 28/05/2023 to 29/05/2023
Time of Monitoring	: 10.:50AM to 10:50AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	53.6	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	42.0	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003038F
M/s.Pines Haldwani	Reporting Date:	31/05/2023
	Receipt Date:	30/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Pines)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 27/05/2023 to 28/05/2023
Time of Monitoring	: 01:50 PM to 01:50 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	54.7	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	41.9	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003041F
M/s. Kamalwaganja Haldwani	Reporting Date:	01/06/2023
	Receipt Date:	31/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area (Kamalwaganja)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 29/05/2023 to 30/05/2023
Time of Monitoring	: 10:30AM to 10:30AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	57.9	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	44.2	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003042F
M/s.Transport Nagar Haldwani	Reporting Date:	01/06/2023
	Receipt Date:	31/05/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Transport Nagar)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 29/05/2023 to 30/05/2023
Time of Monitoring	: 01:09 PM to 01:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	59.2	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	47.1	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003044F
M/s.Pholchur Haldwani	Reporting Date:	01/06/2023
	Receipt Date:	31/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: UPCL Office & Yard Area(Pholchur)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 29/05/2023 to 30/05/2023
Time of Monitoring	: 03:09 PM to 03:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	54.5	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	44.3	dB	**Commercial Area-**	**65**	**55**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000003046F
M/s.Dhaulkhera Nainital	Reporting Date:	01/06/2023
	Receipt Date:	31/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Near Indain Oil Depot Barelliy Road
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 29/05/2023 to 30/05/2023
Time of Monitoring	: 11:30AM to 11:30AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	55.6	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	45.0	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000003049F
M/s.Kaniya Ramnager	Reporting Date:	02/06/2023
	Receipt Date:	01/06/2023
	Format No:	7.8-F-01
	arty Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Near Sawaldya Kaniya Ramnagar
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 30/05/2023 to 31/05/2023
Time of Monitoring	: 10:40AM to 10:40AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	61.3	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	49.0	dB	**Commercial Area-**	**65**	**55**

End of Report

Name & Address of Client:	Report No.:	550723000002462F
M/s- Hathibarakala	Reporting Date:	17/05/2023
	Receipt Date:	10/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Office Area (Hathibarakala)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 09/05/2023 to 10/05/2023
Time of Monitoring	: 11:58 AM to 11:58 AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	69.2	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	56.0	dB	**Industrial Area-**	**75**	**70**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000002492F
M/s- Laltapper Doiwala	Reporting Date:	17/05/2023
	Receipt Date:	11/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Labour Hut
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 10/05/2023 to 11/05/2023
Time of Monitoring	: 12:50 PM to 12:50 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	68.2	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	58.7	dB	**Industrial Area-**	**75**	**70**

End of Report

Name & Address of Client:	Report No.:	550723000002593F
M/s-Landhora Roorkee	Reporting Date:	20/05/2023
	Receipt Date:	13/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Sundari Landhora Roorkee
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 12/05/2023 to 13/05/2023
Time of Monitoring	: 01:30 PM to 01:30 PM
Ambient Temperature (^{0}C)	: Min.15.00, Max.25.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM)	66.3	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM)	55.8	dB	**Industrial Area-**	**75**	**70**

End of Report

Name & Address of Client:	Report No.:	550723000002591F
M/s-Mangalor Haridwar .	Reporting Date:	20/05/2023
	Receipt Date:	13/05/2023
	Format No:	7.8-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Gidar Jodda Mangalor Private Land by pitcul
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 12/05/2023 to 13/05/2023
Time of Monitoring	: 02:15 PM to 02:15 PM
Ambient Temperature (^{0}C)	: Min.15.00, Max.25.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM)	65.5	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM)	54.2	dB	**Industrial Area-**	**75**	**70**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000002490F
M/s- Ramnagar Donda Doiwala	Reporting Date:	17/05/2023
	Receipt Date:	11/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Temple Opposite Site to SS
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 10/05/2023 to 11/05/2023
Time of Monitoring	: 12:05 PM to 12:05 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	66.9	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	57.5	dB	**Industrial Area-**	**75**	**70**

End of Report

Name & Address of Client:	Report No.:	550723000002499F
M/s- Rudrapur, Vikasnagar Dehradun	Reporting Date:	17/05/2023
	Receipt Date:	11/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Office & Yard Area Rudrapur
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 10/05/2023 to 11/05/2023
Time of Monitoring	: 10:50 AM to 10:50 AM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No.	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	68.2	dB	Limits in dB(A) Leq. Category of Area/Zone	-	-
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	58.5	dB	**Industrial Area-**	**75**	**70**

*****End of Report*****

Name & Address of Client:	Report No.:	550723000002465F
M/s- Sahashtradhara	Reporting Date:	17/05/2023
	Receipt Date:	10/05/2023
	Format No:	7.8-F-01
	Party Reference	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Office Area (Sahashtradhara)
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 09/05/2023 to 10/05/2023
Time of Monitoring	: 01:09 PM to 01:09 PM
Ambient Temperature (^{0}C)	: Min.21.00, Max.31.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	69.2	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	58.0	dB	**Industrial Area-**	**75**	**70**

End of Report

Name & Address of Client:	Report No.:	550723000002497F
M/s.-Sahiya	Reporting Date:	18/05/2023
	Receipt Date:	12/05/2023
	Format No:	7.08-F-01
	Party Reference No:	By Mail

SAMPLE DESCRIPTION: AMBIENT NOISE MONITORING

General Information:

Sample Collected by	: Lab Representative
Sampling Location	: Office & Yard Area
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 11/05/2023 to 12/05/2023
Time of Monitoring	: 11:10 AM to 11:10 AM
Ambient Temperature (^{0}C)	: Min.12.00, Max.22.00
Surrounding activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: CPCB Guideline & IS 9876
Parameters Required	: As per Work Order

TEST RESULTS

Sr. No	Parameters	Results	Units	Requirements (as per CPCB Guidelines)	Day	Night
				Limits in dB(A) Leq.	-	-
1.	EQUVALENT NOISE LEVEL (6.00 AM to 10.00 PM) (Day Time)	69.1	dB	Category of Area/Zone		
2.	EQUVALENT NOISE LEVEL (10.00 PM to 6.00 AM) (Night Time)	57.3	dB	**Industrial Area-**	**75**	**70**

*****End of Report****

6.3 WATER MONITORING:

GROUNDWATER SAMPLING

Samples for groundwater quality monitoring would be collected from one of the Following threetypes of wells:

1. **Open dug wells** in use for domestic or irrigation water supply,

2.**Tube wells**fitted with a hand pump or a power-driven pump for domestic water supply orirrigation

3.**Piezometers** purpose-built for recording of water level and water quality monitoring.

4.**Open dug wells**, which are not in use or have been abandoned, will not be considered as water quality monitoring station. However, such wells could be considered for water level monitoring.

5. Use a weighted sample bottle to collect sample from an open well about 30 cm below the surface of the water. Do not use a plastic bucket, which is likely to skim the surface layer only.

6. Samples from the production tube wells will be collected after running the well for about 5 minutes.

7. Non-production piezometers should be purged using a submersible pump. The purged water volume should equal 4 to 5 times the standing water volume, before sample is collected.

8. For bacteriological samples, when collected from tube wells/hand pump, the spout/outlet of the pump should be sterilized under flame by spirit lamp before collection of sample in container.

(F) DRINKING WATER:

The sample should be collected from tap or pipeline directly as close as possible to the reservoirin the container.

(G) SEWAGE/ETP EFFLUENT

Sample should be collected at the point where the Effluent enter in treatment plant and at the point after various stages of treatments. Sample may also be collected from each step of treatment if required.

(H) SAMPLING FROM TAP

Avoid leaking taps, as flow cannot be controlled. Close the tap tightly with no dripping of water. Flam the tap (in case of plastic tap, apply alcohol or spirit, preferably rectified, and allow it to dry). Open the tap fully and allow water to run for two to three minutes. Reduce the flow and gently fill the bottle and place the stopper.

(J) TYPES OF SAMPLING

1) GRAB SAMPLES

One sample is taken at a given location and time. Grab samples are single samples collected at a specific spot at a site over a short period of time (typically seconds or minutes).Thus, they represent "snapshot" in both space and time of a sampling area. Discrete grab samples are taken at a selected location, depth, and time.

A sample can represent only the composition of its source at the time and place of collection. However, when a source is known to be relatively constant in composition over an extended time or over substantial distances in a directions, then the sample may represent a longer time period and /or a larger volume than the specific time and place at which it was collected.

The same principles apply to sampling waste water, sludge, sludge bank and muds although these matrices are not specifically addressed in this Title.

2) COMPOSITE SAMPLES

In most cases, these samples refer to a mixture of spot samples collected at the same sampling site at different times. This method of collection reduces the analytical effort, because variations are middle out in one analysis. It is a useful technique when daily variations occur and seasonal variations are the objective of the program.

Composite Sample should provide a more representative sampling of heterogeneous matrices in which the concentration of the analysts of interest may very over short periods of time and or/space.

Composite samples can be obtained by combining portions of multiple grab samples or by using specially designed automatic sampling devices. Sequential (time) composite samples are collected by using continuous, constant sample pumping or mixing equal water volumes collected at regular time intervals.

3) INTEGRATED SAMPLES

Sometimes samples are collected at the same location but, due to horizontal or vertical variation in the composition of the river (or in water flow) or lake, they come from different points in the cross-section that are regarded with a different relative importance. To evaluate the average composition, total load or mass balance, integrated samples are collected, often in proportion to the river flow of the areas of sample collection.

(K) SAMPLE VOLUMES

Collect a 1 Liter sample for most physical and chemical analyses. For certain determination, larger samples may be necessary as per below table Lists volumes ordinarily required for analyses, but it is strongly recommended that the laboratory that will conduct the analyses also be consulted to verify the analytical needs of sampling procedures as they pertain to the goals and data quality objective of an investigation.

(L) PRESERVATION AND STORAGE

The sample containers needed for a sampling campaign are prepared by the laboratory and given to the person collecting samples.

TABLE 3

Observation:

Address of Client:		**Report No.:**	550623000002980F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Sarverkhera**		**Reporting Date:**	31/05/2023
		Date of Sampling	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**NA**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	8.84	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	118.9	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	47.6	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	86.9	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	72.3	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	22.01	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	422	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000002983F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Doraha Bazpur**		**Reporting Date:**	31/05/2023
		Date of Sampling	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.05	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	78.2	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	17.4	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	117.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	48.7	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	8.3	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	317	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000002987F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Kashipur**		**Reporting Date:**	31/05/2023
		Date of Sampling	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	6.53	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	45.5	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	12.8	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	34.6	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	32.5	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	7.6	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	190	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000002991F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Matkota Rudrapur**		**Reporting Date:**	31/05/2023
		Date of Sampling	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.12	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	112.4	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	45.2	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	67.3	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	54.8	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	11.0	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	206	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000002996F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Badhaipura Rudrapur-1**		**Reporting Date:**	31/05/2023
		Date of Sampling	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	6.94	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	108	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	43.2	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	67.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	86.5	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	16.2	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	356	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000002999F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Near collectrate Rudrapur**		**Reporting Date:**	31/05/2023
		Date of Sampling	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Behind Mandi parishad Residential complex**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.55	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	89.4	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	23.8	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	76.4	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	32.6	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	7.3	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	265	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003004F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Lalpur Rudrapur**		**Reporting Date:**	31/05/2023
		Date of Sampling	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.15	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	45.3	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	14.6	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	76.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	32.0	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	5.0	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	175	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003010F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Bharuni Sitarganj**		**Reporting Date:**	31/05/2023
		Date of Sampling	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.05	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	38.5	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	15.3	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	108.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	32.5	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	6.0	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	202	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003012F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Jhankat Khatima**		**Reporting Date:**	31/05/2023
		Date of Sampling	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	6.54	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	28.7	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	11.5	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	66.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	30.7	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	4.2	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	122	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003017F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Khatima**		**Reporting Date:**	31/05/2023
		Date of Sampling	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Khatima Melaghat Road**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	6.54	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	88.0	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	35.4	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	53.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	107.4	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	13.5	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	356	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003025F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Lamgarh Almora**		**Reporting Date:**	05/06/2023
		Date of Sampling	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	6.97	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	67.3	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	27.0	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	98.0	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	35.4	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	10.4	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	197	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003032F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Garampani Haldwani**		**Reporting Date:**	05/06/2023
		Date of Sampling	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.34	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	65.2	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	26.4	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	45.3	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	16.4	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	10.0	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	126	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003032F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Garampani Haldwani**		**Reporting Date:**	05/06/2023
		Date of Sampling	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.34	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	65.2	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	26.4	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	45.3	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	16.4	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	10.0	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	126	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003034F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Talla Ramgarh,Haldwani**		**Reporting Date:**	05/06/2023
		Date of Sampling	28/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.06	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	32.7	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	13.6	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	66.2	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	22.0	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	5.0	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	105	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003037F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Sarghat Mukteshwar**		**Reporting Date:**	05/06/2023
		Date of Sampling	28/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Borewell**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.03	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	22.5	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	9.0	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	85.2	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	32.7	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	3.3	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	96.0	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003040F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Pines, Nainital**		**Reporting Date:**	05/06/2023
		Date of Sampling	28/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	6.95	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	56.3	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	22.5	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	87.1	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	16.4	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	10.3	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	140	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Address of Client:		**Report No.:**	550623000003051F
M/s. Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project **Kaniya Ramgarh Haldwani**		**Reporting Date:**	05/06/2023
		Date of Sampling	30/05/2023
		Receipt Date:	01/06/2023
		Period of Testing:	01/06/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Ground Water**	**Preservation**	Refrigerated
Sampling Location:	**Hand Pump**	**Format No:**	7.8-F-01
Sampling Protocol:	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity:	**2 Ltr.**	**Parameter Required**	As Per Work Order

TEST RESULTS

S. No.	Parameters	Test –Methods	Results	Units	Limit of IS: 10500-2012	
					Desirable Limits (Max)	Permissible Limits the absence of Alternate Source (Max.)
1.	pH (at 25^0C)	IS 3025 (Part-11) : 1983	7.01	-	6.5 to 8.5	No relaxation
2.	Color	IS 3025 (Part-4) : 2021	< 5.0	Hazen	5	15
3.	Turbidity	IS 3025: (Part-10) : 1984	< 5.0	NTU	1	5
4.	Odour	IS 3025 (Part-5) : 2018	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Part-7) : 2017	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025 (Part-21) : 2009	106	mg/l	200	600
7.	Calcium as Ca	IS 3025 (Part-40) :1991	53.2	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS 3025 (Part-23) : 1996	98.2	mg/l	200	600
9.	Chloride as Cl	IS 3025 (Part-32) :1988	34.7	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (Part-46) : 1994	16.2	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (Part-16) : 1984	266	mg/l	500	2000
12.	Total Coliform	IS:1622:1981	Absent	MPN/100ml	Absent	NA
13.	E. Coli	IS:1622:1981	Absent	MPN/100ml	Absent	NA

*****End of Report*****

Name & Address of Client:		**Report No.:**	550723000002466F
M/s - Sahashtradhara		**Reporting Date:**	17/05/2023
		Date of Sampling	10/05/2023
		Receipt Date:	10/05/2023
		Period of Testing:	11-17/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**River**	**Format No:**	7.8-F-01
Sampling & Analysis Protocol	**IS: 3025, Part-1**	**Party Reference No:**	By Mail
Sample Quantity	**2 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.21	-	IS-3025 (P-11)
2.	Electrical Conductivity	1510	µs/cm	IS-3025 (P-14)
3.	Turbidity	75	NTU	IS-3025 (P-10)
4.	Color	Hazy	Hazen	IS-3025 (P-04)
5	COD	265	mg/l	IS-3025 (P-58)
6.	DO	0.7	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	84.7	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	150	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	982	mg/l	IS-3025 (P-16)
10.	Oil and Grease	14.8	mg/l	IS-3025 (P-39)
11.	Total Phosphate	2.69	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	4.3	mg/l	IS-3025 (P-34)
13.	Total Coliform	1780	MPN/100	IS:1622: 1981
14.	Faecal Coliform	480	MPN/100	IS:1622: 1981

***BDL-Below Detection Limit

End of Report

Name & Address of Client:		**Report No.:**	550723000002982F
M/s – Doraha Bazpur		**Reporting Date:**	31/05/2023
		Date of Sampling	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	25-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**River**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.38	-	IS-3025 (P-11)
2.	Electrical Conductivity	406	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	43	mg/l	IS-3025 (P-58)
6.	DO	4.5	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	8.0	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	65	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	236	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	0.74	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	ND	mg/l	IS-3025 (P-34)
13.	Total Coliform	102	MPN/100	IS:1622: 1981
14.	Faecal Coliform	32	MPN/100	IS:1622: 1981

***BDL-Below Detection Limit

End of Report

Name & Address of Client:		**Report No.:**	550723000002986F
M/s – Kashipur		**Reporting Date:**	31/05/2023
		Date of Sampling	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	25-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Drona Sagar**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.38	-	IS-3025 (P-11)
2.	Electrical Conductivity	543	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	16	mg/l	IS-3025 (P-58)
6.	DO	3.9	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	< 5.0	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	10.8	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	365	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	0.6	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	0.34	mg/l	IS-3025 (P-34)
13.	Total Coliform	122	MPN/100	IS:1622: 1981
14.	Faecal Coliform	45	MPN/100	IS:1622: 1981

***BDL-Below Detection Limit

End of Report

Name & Address of Client:		**Report No.:**	550723000002992F
M/s – Matkota Rudrapur		**Reporting Date:**	31/05/2023
		Date of Sampling	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Rainfed stream-Alo Boundry**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.75	-	IS-3025 (P-11)
2.	Electrical Conductivity	398	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	9.7	mg/l	IS-3025 (P-58)
6.	DO	5.7	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	< 5.0	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	12.4	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	256	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	0.42	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	ND	mg/l	IS-3025 (P-34)
13.	Total Coliform	26	MPN/100	IS:1622: 1981
14.	Faecal Coliform	8.0	MPN/100	IS:1622: 1981

***BDL-Below Detection

End of Report

Name & Address of Client:		**Report No.:**	550723000002995F
M/s – Bhadaipura Rudrapur-1		**Reporting Date:**	31/05/2023
		Date of Sampling	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Pond**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.42	-	IS-3025 (P-11)
2.	Electrical Conductivity	324	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	28.0	mg/l	IS-3025 (P-58)
6.	DO	2.7	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	8.8	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	76	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	206	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.95	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	0.8	mg/l	IS-3025 (P-34)
13.	Total Coliform	28	MPN/100	IS:1622: 1981
14.	Faecal Coliform	12	MPN/100	IS:1622: 1981

BDL-Below Detection ***End of Report

Name & Address of Client:		**Report No.:**	550723000003003F
M/s – Lalpur Rudrapur-1		**Reporting Date:**	31/05/2023
		Date of Sampling	23/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Pond Stream**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.19	-	IS-3025 (P-11)
2.	Electrical Conductivity	343	µs/cm	IS-3025 (P-14)
3.	Turbidity	16.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	86.0	mg/l	IS-3025 (P-58)
6.	DO	2.8	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	15.2	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	163	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	200	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.3	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	1.0	mg/l	IS-3025 (P-34)
13.	Total Coliform	40	MPN/100	IS:1622: 1981
14.	Faecal Coliform	12	MPN/100	IS:1622: 1981

BDL-Below Detection ***End of Report

Name & Address of Client:		**Report No.:**	550723000003007F
M/s – Sitarganj Rudrapur		**Reporting Date:**	31/05/2023
		Date of Sampling	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Pond**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.64	-	IS-3025 (P-11)
2.	Electrical Conductivity	412	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	106.0	mg/l	IS-3025 (P-58)
6.	DO	4.2	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	12.1	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	14	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	354	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	0.7	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	1.0	mg/l	IS-3025 (P-34)
13.	Total Coliform	46	MPN/100	IS:1622: 1981
14.	Faecal Coliform	10	MPN/100	IS:1622: 1981

BDL-Below Detection ***End of Report

Name & Address of Client:		**Report No.:**	550723000003013F
M/s – Jhankat Khatima		**Reporting Date:**	31/05/2023
		Date of Sampling	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**S.S.Boundary**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.83	-	IS-3025 (P-11)
2.	Electrical Conductivity	365	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	14.0	mg/l	IS-3025 (P-58)
6.	DO	4.2	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	4.1	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	16.7	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	198	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	N.D.	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	1.5	mg/l	IS-3025 (P-34)
13.	Total Coliform	80	MPN/100	IS:1622: 1981
14.	Faecal Coliform	21	MPN/100	IS:1622: 1981

BDL-Below Detection ***End of Report

Name & Address of Client:		**Report No.:**	550723000003018F
M/s – Khatima-II U.S.Nagar		**Reporting Date:**	31/05/2023
		Date of Sampling	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Khatima Melaghat Road**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.71	-	IS-3025 (P-11)
2.	Electrical Conductivity	298.4	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	20.6	mg/l	IS-3025 (P-58)
6.	DO	4.4	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	8.6	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	10.7	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	168	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	ND	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	ND	mg/l	IS-3025 (P-34)
13.	Total Coliform	67	MPN/100	IS:1622: 1981
14.	Faecal Coliform	22	MPN/100	IS:1622: 1981

BDL-Below Detection Limit,ND:Not Detected ***End of Report

Name & Address of Client:		**Report No.:**	550723000003023F
M/s – Bajol Almora Ranikhet		**Reporting Date:**	05/06/2023
		Date of Sampling	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Patti River 300m**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	5.95	-	IS-3025 (P-11)
2.	Electrical Conductivity	324	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	20.0	mg/l	IS-3025 (P-58)
6.	DO	3.8	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	4.2	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	13.0	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	200	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	ND	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	ND	mg/l	IS-3025 (P-34)
13.	Total Coliform	19.0	MPN/100	IS:1622: 1981
14.	Faecal Coliform	4.0	MPN/100	IS:1622: 1981

BDL-Below Detection Limit,ND:Not Detected ***End of Report

Name & Address of Client:		Report No.:	550723000003031F
M/s – Garampani Haldwani		Reporting Date:	05/06/2023
		Date of Sampling	27/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	Preservation	Refrigerated
Sampling Location:	**Sipra River**	Format No:	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	Party Reference No:	By Mail
Sample Quantity	**3 Ltr.**	Parameter Required	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.25	-	IS-3025 (P-11)
2.	Electrical Conductivity	254	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	15.0	mg/l	IS-3025 (P-58)
6.	DO	4.7	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	5.0	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	15.4	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	156	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.9	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	ND	mg/l	IS-3025 (P-34)
13.	Total Coliform	20	MPN/100	IS:1622: 1981
14.	Faecal Coliform	12	MPN/100	IS:1622: 1981

BDL-Below Detection Limit,ND:Not Detected ***End of Report

Name & Address of Client:		**Report No.:**	550723000003043F
M/s – Transport Nagar Haldwani		**Reporting Date:**	06/06/2023
		Date of Sampling	29/05/2023
		Receipt Date:	31/05/2023
		Period of Testing:	31/05/2023-06/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Teenpani**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.99	-	IS-3025 (P-11)
2.	Electrical Conductivity	3098	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	28.0	mg/l	IS-3025 (P-58)
6.	DO	4.7	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	9.4	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	17.6	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	20.5	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	2.7	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	1.3	mg/l	IS-3025 (P-34)
13.	Total Coliform	43	MPN/100	IS:1622: 1981
14.	Faecal Coliform	27	MPN/100	IS:1622: 1981

BDL-Below Detection Limit,ND:Not Detected ***End of Report

Name & Address of Client:		**Report No.:**	550723000003035F
M/s – Talla Ramgarh Haldwani		**Reporting Date:**	05/06/2023
		Date of Sampling	28/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Ramgarh River**	**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	6.59	-	IS-3025 (P-11)
2.	Electrical Conductivity	208	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	8.0	mg/l	IS-3025 (P-58)
6.	DO	3.6	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	< 5.0	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	18.7	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	129	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	ND	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	0.9	mg/l	IS-3025 (P-34)
13.	Total Coliform	55	MPN/100	IS:1622: 1981
14.	Faecal Coliform	30	MPN/100	IS:1622: 1981

BDL-Below Detection Limit,ND:Not Detected ***End of Report

Name & Address of Client:		**Report No.:**	550723000003026F
M/s – Saraighat Ranikhet Almora		**Reporting Date:**	05/06/2023
		Date of Sampling	28/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:		**Format No:**	7.8-F-01
Sampling Protocol	**IS: 3025(Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.43	-	IS-3025 (P-11)
2.	Electrical Conductivity	392	µs/cm	IS-3025 (P-14)
3.	Turbidity	< 5.0	NTU	IS-3025 (P-10)
4.	Color	< 5.0	Hazen	IS-3025 (P-04)
5	COD	17.0	mg/l	IS-3025 (P-58)
6.	DO	5.8	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	6.2	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	19	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	287	mg/l	IS-3025 (P-16)
10.	Oil and Grease	< 5.0	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.9	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	1.2	mg/l	IS-3025 (P-34)
13.	Total Coliform	50	MPN/100	IS:1622: 1981
14.	Faecal Coliform	36	MPN/100	IS:1622: 1981

BDL-Below Detection Limit,ND:Not Detected ***End of Report

.

Name & Address of Client:		**Report No.:**	550723000002594F
M/s -Sahiya		**Reporting Date:**	20/05/2023
		Date of Sampling	13/05/2023
		Receipt Date:	13/05/2023
		Period of Testing:	15-20/05/2023
		Sample Collected By:	Lab Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**River water**	**Format No:**	7.8-F-01
Sampling & Analysis Protocol	**IS: 3025, Part-1**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULT

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.76	-	IS-3025 (P-11)
2.	Electrical Conductivity	845	µs/cm	IS-3025 (P-14)
3.	Turbidity	7.4	NTU	IS-3025 (P-10)
4.	Color	Hazy	Hazen	IS-3025 (P-04)
5	COD	112	mg/l	IS-3025 (P-58)
6.	DO	0.3	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	32.4	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	89.4	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	468	mg/l	IS-3025 (P-16)
10.	Oil and Grease	2.4	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.4	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	2.1	mg/l	IS-3025 (P-34)
13.	Total Coliform	1042	MPN/100	IS:1622 1981 Reaff 2003
14.	Faecal Coliform	240	MPN/100	IS:1622 1981 Reaff 2003

End of Report

Name & Address of Client:		**Report No.:**	550723000002500F
M/s –Rudrapur Vikasngar Dehradun		**Reporting Date:**	18/05/2023
		Date of Sampling	11/05/2023
		Receipt Date:	12/05/2023
		Period of Testing:	13-18/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Moti River**	**Format No:**	7.8-F-01
Sampling & Analysis Protocol	**IS: 3025 (Part-1)**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.32	-	IS-3025 (P-11)
2.	Electrical Conductivity	365	µs/cm	IS-3025 (P-14)
3.	Turbidity	2.1	NTU	IS-3025 (P-10)
4.	Color	Colorless	Hazen	IS-3025 (P-04)
5	COD	90.4	mg/l	IS-3025 (P-58)
6.	DO	0.2	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	27.7	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	45.0	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	192	mg/l	IS-3025 (P-16)
10.	Oil and Grease	2.4	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.01	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	1.1	mg/l	IS-3025 (P-34)
13.	Total Coliform	920	MPN/100	IS:1622 1981 Reaff 2003
14.	Faecal Coliform	120	MPN/100	IS:1622 1981 Reaff 2003

End of Report

Name & Address of Client:		**Report No.:**	550723000002466F
M/s - Sahashtradhara		**Reporting Date:**	17/05/2023
		Date of Sampling	10/05/2023
		Receipt Date:	10/05/2023
		Period of Testing:	11-17/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**River**	**Format No:**	7.8-F-01
Sampling & Analysis Protocol	**IS: 3025, Part-1**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.21	-	IS-3025 (P-11)
2.	Electrical Conductivity	1510	µs/cm	IS-3025 (P-14)
3.	Turbidity	275	NTU	IS-3025 (P-10)
4.	Color	Hazy	Hazen	IS-3025 (P-04)
5	COD	265	mg/l	IS-3025 (P-58)
6.	DO	0.7	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	84.7	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	150	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	982	mg/l	IS-3025 (P-16)
10.	Oil and Grease	14.8	mg/l	IS-3025 (P-39)
11.	Total Phosphate	2.69	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	4.3	mg/l	IS-3025 (P-34)
13.	Total Coliform	1780	MPN/100	IS:1622 1981 Reaff 2003
14.	Faecal Coliform	480	MPN/100	IS:1622 1981 Reaff 2003

End of Report

Name & Address of Client:		**Report No.:**	550723000002498F
M/s -Sahiya		**Reporting Date:**	18/05/2023
		Date of Sampling	11/05/2023
		Receipt Date:	12/05/2023
		Period of Testing:	13-18/05/2023
		Sample Collected By:	Lab. Rep.
		Sampling Type:	Grab
Sample Description:	**Surface Water**	**Preservation**	Refrigerated
Sampling Location:	**Amlawa River**	**Format No:**	7.8-F-01
Sampling & Analysis Protocol	**IS: 3025, Part-1**	**Party Reference No:**	By Mail
Sample Quantity	**3 Ltr.**	**Parameter Required**	As per work order

TEST RESULTS

S. No.	Parameters	Results	Units	Protocol Used
1.	pH	7.41	-	IS-3025 (P-11)
2.	Electrical Conductivity	892	µs/cm	IS-3025 (P-14)
3.	Turbidity	8.9	NTU	IS-3025 (P-10)
4.	Color	Hazy	Hazen	IS-3025 (P-04)
5	COD	138	mg/l	IS-3025 (P-58)
6.	DO	0.2	mg/l	IS-3025 (P-38)
7.	BOD (3 Days at 27 ^{0}C)	35.8	mg/l	IS-3025 (P-44)
8.	Total Suspended Solid	82.6	mg/l	IS-3025 (P-17)
9.	Total Dissolved Solids	495	mg/l	IS-3025 (P-16)
10.	Oil and Grease	3.8	mg/l	IS-3025 (P-39)
11.	Total Phosphate	1.21	mg/l	IS-3025 (P-31)
12.	Total Nitrogen	2.1	mg/l	IS-3025 (P-34)
13.	Total Coliform	1030	MPN/100	IS:1622 1981 Reaff 2003
14.	Faecal Coliform	220	MPN/100	IS:1622 1981 Reaff 2003

***BDL-Below Detection

End of Report

6.4 SOIL MONITORING:

1) PROCEDURE

(a) Sampling of soil in field:

Materials like weeds, stubble and other unwanted substances are removed from the sampling point prior to taking the sample.

Demarcate the field to be surveyed into uniform portions (quadrates), each of which must be sampled separately. The samples then can be mixed and homogenized. An aliquot drawn from this homogenous sample can be treated as representative sample of that area.

V-shaped cut is made with a spade to remove 1 to 2 cm slice of soil. Obtain a uniformly thick slice of soil of the desired depth from each place. The sample may be collected on the blade of the spade and put in a clean bucket. In this way collect samples from all the spots marked for one sampling unit. In case of hard soil, samples are taken with the help of auger from the desired depth and collected in the bucket. Pour the soil from the bucket on a piece of clean paper or cloth and mix thoroughly. Spread the soil evenly and draw about 1kg sample. Reject rest of the soil. Put the soil sample in a polythene bag. Each bag should be properly marked to identify the sample. The bag used for sampling must always be clean and free from any contamination. Write the details of the sample in the information sheet.

(b) Sampling of soil in lab:

(Mixing and Preparation of Composite Samples)

The organic matter, like tree roots and pieces of bark should be removed from the sample. Similarity, matter other than soil, like shells are separated from the main soil sample.

- A sample collected from the sampling location is mixed by rolling or turning as follows: opposite corners of the cloth or gunny bag on which the sample is collected are held firmly.
- One corner is then pulled diagonally across the sample slowly so that soil rolls over the cloth towards the opposite corner.
- Then the opposite corner of the cloth is pulled back over the soil to roll it back.
- The process is repeated using the other corners of the cloth, and the entire procedure repeated 5-10 times to ensure a through mixture.
- The mixed sample is then coned in the center of the cloth, flattened, and divided into two equal parts with a flat metal sheet or spatula.
- Each half portion is again divided into half, making a total of four quarters in separate piles. Two diagonally opposite quarters are then discarded quantitatively and the remaining two mixed and preserved as the resulting composite sample.

TABLE 4

Observation:

Name & Address of Client:		**Report No.:**	550623000002463F
M/s- Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project Hathibarkala		**Reporting Date:**	17/05/2023
		Date of Sampling:	09/05/2023
		Receipt Date:	10/05/2023
		Period of Testing:	12-17/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**NA**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.23	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.0	%
	Sand	IS:1498:1970	30.3	%
	Silt	IS:1498:1970	39.2	%
	Clay	IS:1498:1970	22.5	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.42	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.045	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.76	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.0	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.59	--
10.	Moisture Content	IS:2720(P-2):1973	15.0	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000002488F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Araghar,Dehradun		**Reporting Date:**	17/05/2023
		Date of Sampling:	09/05/2023
		Receipt Date:	10/05/2023
		Period of Testing:	12-17/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**NA**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.45	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	6.7	%
	Sand	IS:1498:1970	29.4	%
	Silt	IS:1498:1970	31.7	%
	Clay	IS:1498:1970	32.2	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.08	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.039	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.80	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.6	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.33	--
10.	Moisture Content	IS:2720(P-2):1973	15.2	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000002984F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Doraha,Bazpur		**Reporting Date:**	31/05/2023
		Date of Sampling:	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	25-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**NA**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.43	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.4	%
	Sand	IS:1498:1970	32.5	%
	Silt	IS:1498:1970	34.2	%
	Clay	IS:1498:1970	24.9	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.12	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.036	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.9	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	11.6	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.27	--
10.	Moisture Content	IS:2720(P-2):1973	14.7	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000002988F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Kashipur		**Reporting Date:**	17/05/2023
		Date of Sampling:	23/05/2023
		Receipt Date:	25/05/2023
		Period of Testing:	25-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.02	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.76	%
	Sand	IS:1498:1970	31.4	%
	Silt	IS:1498:1970	33.2	%
	Clay	IS:1498:1970	26.64	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.27	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.94	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.6	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.24	--
10.	Moisture Content	IS:2720(P-2):1973	13.8	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000002463F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Matkota,Rudrapur		**Reporting Date:**	31/05/2023
		Date of Sampling:	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area(UPCL)**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.11	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.9	%
	Sand	IS:1498:1970	30.2	%
	Silt	IS:1498:1970	38.4	%
	Clay	IS:1498:1970	22.5	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.56	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.022	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.86	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.4	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.63	--
10.	Moisture Content	IS:2720(P-2):1973	15.3	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000002994F
M/s- Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project Badhaipura,Rudrapur		**Reporting Date:**	31/05/2023
		Date of Sampling:	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	6.78	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	9.7	%
	Sand	IS:1498:1970	28.5	%
	Silt	IS:1498:1970	35.3	%
	Clay	IS:1498:1970	26.5	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.65	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.017	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.87	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.6	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.54	--
10.	Moisture Content	IS:2720(P-2):1973	14.3	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003002F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Lalpur,Rudrapur-1		**Reporting Date:**	31/05/2023
		Date of Sampling:	24/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area(UPCL)**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.12	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.5	%
	Sand	IS:1498:1970	36.4	%
	Silt	IS:1498:1970	32.8	%
	Clay	IS:1498:1970	22.3	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.65	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.011	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.87	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.3	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.45	--
10.	Moisture Content	IS:2720(P-2):1973	15.6	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		**Report No.:**	550623000003006F
M/s- Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project Sitarganj,Rudrapur		**Reporting Date:**	31/05/2023
		Date of Sampling:	25/05/2023
		Receipt Date:	26/05/2023
		Period of Testing:	26-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	6.53	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	7.2	%
	Sand	IS:1498:1970	32.4	%
	Silt	IS:1498:1970	32.8	%
	Clay	IS:1498:1970	27.6	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.09	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.84	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	11.6	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.63	--
10.	Moisture Content	IS:2720(P-2):1973	14.7	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003014F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Jhankat Khatima		Reporting Date:	31/05/2023
		Date of Sampling:	25/05/2023
		Receipt Date:	27/05/2023
		Period of Testing:	27-31/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**NA**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.78	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	9.3	%
	Sand	IS:1498:1970	29.2	%
	Silt	IS:1498:1970	37.8	%
	Clay	IS:1498:1970	23.7	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.45	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.013	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.98	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	14.4	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.64	--
10.	Moisture Content	IS:2720(P-2):1973	14.6	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003022F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Bajol,Almora,Ranikhet		**Reporting Date:**	05/06/2023
		Date of Sampling:	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.09	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.2	%
	Sand	IS:1498:1970	32.5	%
	Silt	IS:1498:1970	36.3	%
	Clay	IS:1498:1970	23.0	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.12	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.88	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.3	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.12	--
10.	Moisture Content	IS:2720(P-2):1973	15.87	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003028F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Tarikhet,Ranikhet,Almora		Reporting Date:	05/06/2023
		Date of Sampling:	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
Sample Description	**Soil Sample**	Sample Collected By:	Lab. Rep.
Sampling Location:	**Yard Area**	Format No:	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	Party Reference No:	By Mail
Sample Quantity:	**500 gm.**	Parameter Required:	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.14	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.5	%
	Sand	IS:1498:1970	35.7	%
	Silt	IS:1498:1970	34.3	%
	Clay	IS:1498:1970	21.5	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.54	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.65	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	13.8	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.53	--
10.	Moisture Content	IS:2720(P-2):1973	16.77	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

End of Report

Name & Address of Client:		Report No.:	550623000003030F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Garampani,Haldwani		**Reporting Date:**	05/06/2023
		Date of Sampling:	27/05/2023
		Receipt Date:	29/05/2023
		Period of Testing:	29/05/2023-05/06/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.63	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.9	%
	Sand	IS:1498:1970	35.2	%
	Silt	IS:1498:1970	33.2	%
	Clay	IS:1498:1970	22.7	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.67	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.076	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.76	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	11.5	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.42	--
10.	Moisture Content	IS:2720(P-2):1973	17.04	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003039F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Pines,Nainital		**Reporting Date:**	05/06/2023
		Date of Sampling:	28/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.24	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.8	%
	Sand	IS:1498:1970	34.5	%
	Silt	IS:1498:1970	35.2	%
	Clay	IS:1498:1970	21.5	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.43	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.67	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.4	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.57	--
10.	Moisture Content	IS:2720(P-2):1973	17.63	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003045F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Phoolchour,Haldwani		**Reporting Date:**	05/06/2023
		Date of Sampling:	29/05/2023
		Receipt Date:	30/05/2023
		Period of Testing:	30/05/2023-05/06/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.13	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.9	%
	Sand	IS:1498:1970	31.3	%
	Silt	IS:1498:1970	39.0	%
	Clay	IS:1498:1970	20.8	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.46	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.054	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.78	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	14.3	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.66	--
10.	Moisture Content	IS:2720(P-2):1973	16.65	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003022F
M/s- Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project Dhaulakhera,Nainital		**Reporting Date:**	05/06/2023
		Date of Sampling:	31/05/2023
		Receipt Date:	01/06/2023
		Period of Testing:	01/06/2023-05/06/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.87	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	9.45	%
	Sand	IS:1498:1970	28.87	%
	Silt	IS:1498:1970	32.88	%
	Clay	IS:1498:1970	28.80	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.55	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.87	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	12.6	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.45	--
10.	Moisture Content	IS:2720(P-2):1973	17.9	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003055F
M/s-Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project Sawra		**Reporting Date:**	18/05/2023
		Date of Sampling:	11/05/2023
		Receipt Date:	12/05/2023
		Period of Testing:	12/05/2023-18/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	6.82	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	9.01	%
	Sand	IS:1498:1970	29.6	%
	Silt	IS:1498:1970	34.4	%
	Clay	IS:1498:1970	26.99	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.45	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	0.034	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.79	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	13.8	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.25	--
10.	Moisture Content	IS:2720(P-2):1973	16.7	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003056F
M/s- **Anjali Semwal** Uttarakhand Transmission Strengthening and Distribution Improvement Project Transport Nagar,Haldwani		**Reporting Date:**	05/06/2023
		Date of Sampling:	30/05/2023
		Receipt Date:	01/06/2023
		Period of Testing:	01/06/2023-05/06/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.06	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	8.65	%
	Sand	IS:1498:1970	29.2	%
	Silt	IS:1498:1970	33.9	%
	Clay	IS:1498:1970	28.25	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.53	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	o.076	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	1.77	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	13.5	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.49	--
10.	Moisture Content	IS:2720(P-2):1973	15.4	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

Name & Address of Client:		Report No.:	550623000003058F
M/s- Anjali Semwal Uttarakhand Transmission Strengthening and Distribution Improvement Project Selaqui,Dehradun		**Reporting Date:**	18/05/2023
		Date of Sampling:	10/05/2023
		Receipt Date:	12/05/2023
		Period of Testing:	13/05/2023-18/05/2023
Sample Description	**Soil Sample**	**Sample Collected By:**	Lab. Rep.
Sampling Location:	**Yard Area**	**Format No:**	7.8-F-01
Sampling Protocol:	**ECON/STP/SOIL/01**	**Party Reference No:**	By Mail
Sample Quantity:	**500 gm.**	**Parameter Required:**	As per work order

TEST RESULTS

S. No.	Parameters	Protocol	Results	Units
1.	pH (at 25^0C)	IS:2720(P-26):1987	7.45	--
2.	Soil Texture	IS:1498:1970	--	--
	Gravel	IS:1498:1970	9.30	%
	Sand	IS:1498:1970	29.67	%
	Silt	IS:1498:1970	34.05	%
	Clay	IS:1498:1970	26.53	%
3.	Total Organic Carbon	IS:2720(P-22):1972	1.76	%
4.	Volatile Organic Compound	IS:2720(P-22):1972	Not Detected	%
5.	Total Petroleum Hydrocarbon	ECON/STP/SOIL/21	Not Detected	mg/g
6.	Heavy Metals (as Pb)	ECON/STP/SOIL/20	Not Detected	mg/g
7.	Maximum Dry Density	IS:2720(P-8):1983	2.01	g/cc
8.	Optimum Moisture Content	IS:2720(P-8):1983	11.55	%
9.	Specific Gravity	IS:2720(P-3)Sec-2:1980	2.64	--
10.	Moisture Content	IS:2720(P-2):1973	16.87	%
11.	PCB	ECON/STP/SOIL/19	Not Detected	mg/g
12.	PAH	ECON/STP/SOIL/19	Not Detected	mg/g

*****End of Report*****

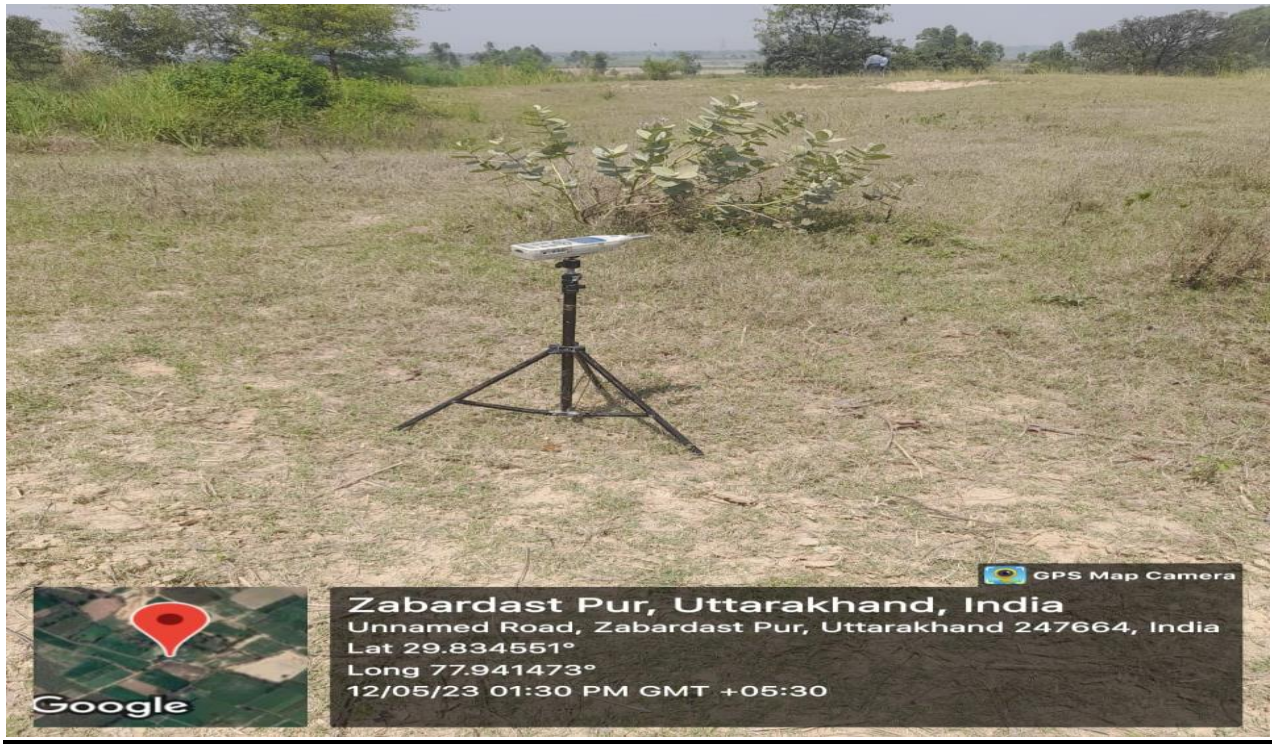
MONITORING PHOTOGRAPHS

Air Monitoring


GPS Map Camera
Zabardast Pur, Uttarakhand, India
Unnamed Road, Zabardast Pur, Uttarakhand 247664, India
Lat 29.834519°
Long 77.941454°
12/05/23 01:31 PM GMT +05:30
Google


GPS Map Camera
Roorkee, Uttarakhand, India
Khasra No 97 Jhabrera Road Vill – Kurdi, Manglour,
Roorkee, Uttarakhand 247656, India
Lat 29.79223°
Long 77.849658°
12/05/23 02:17 PM GMT +05:30
Google

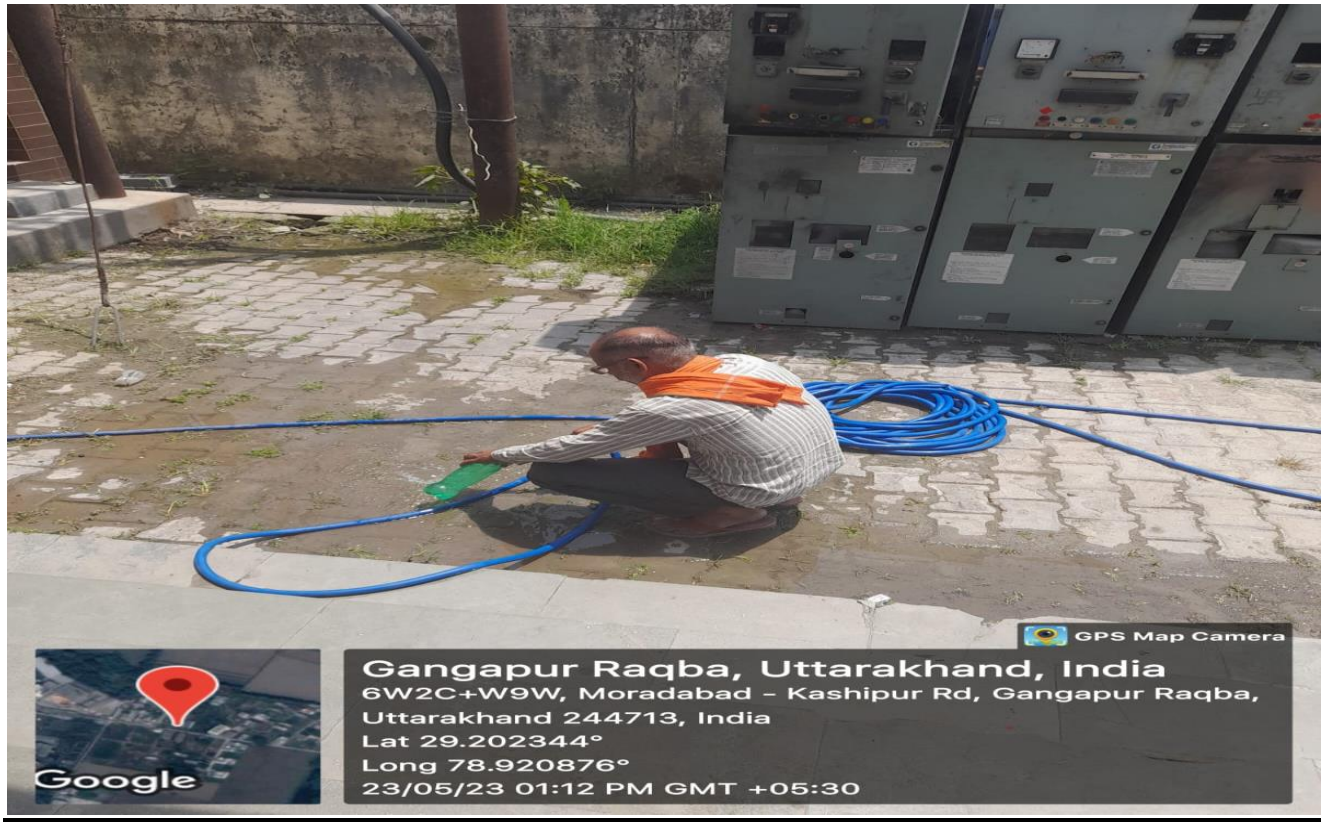
NOISE MONITORING

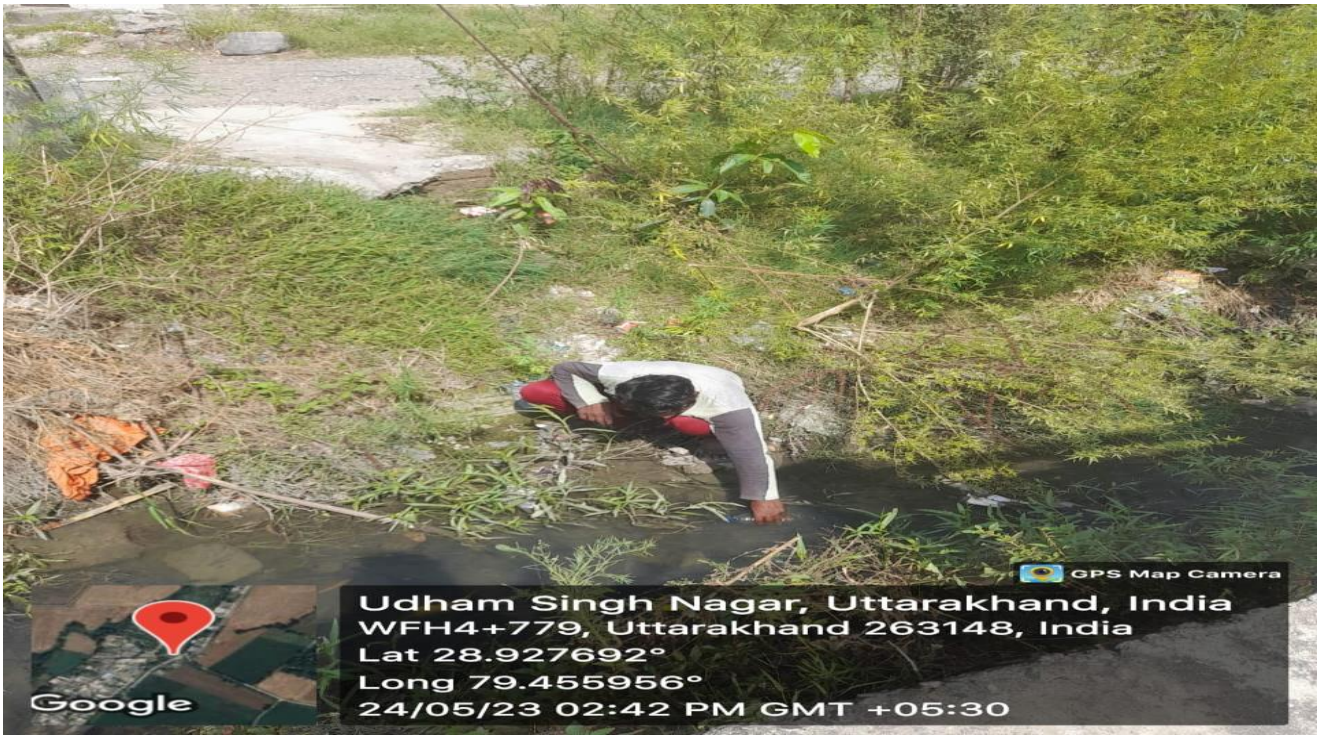


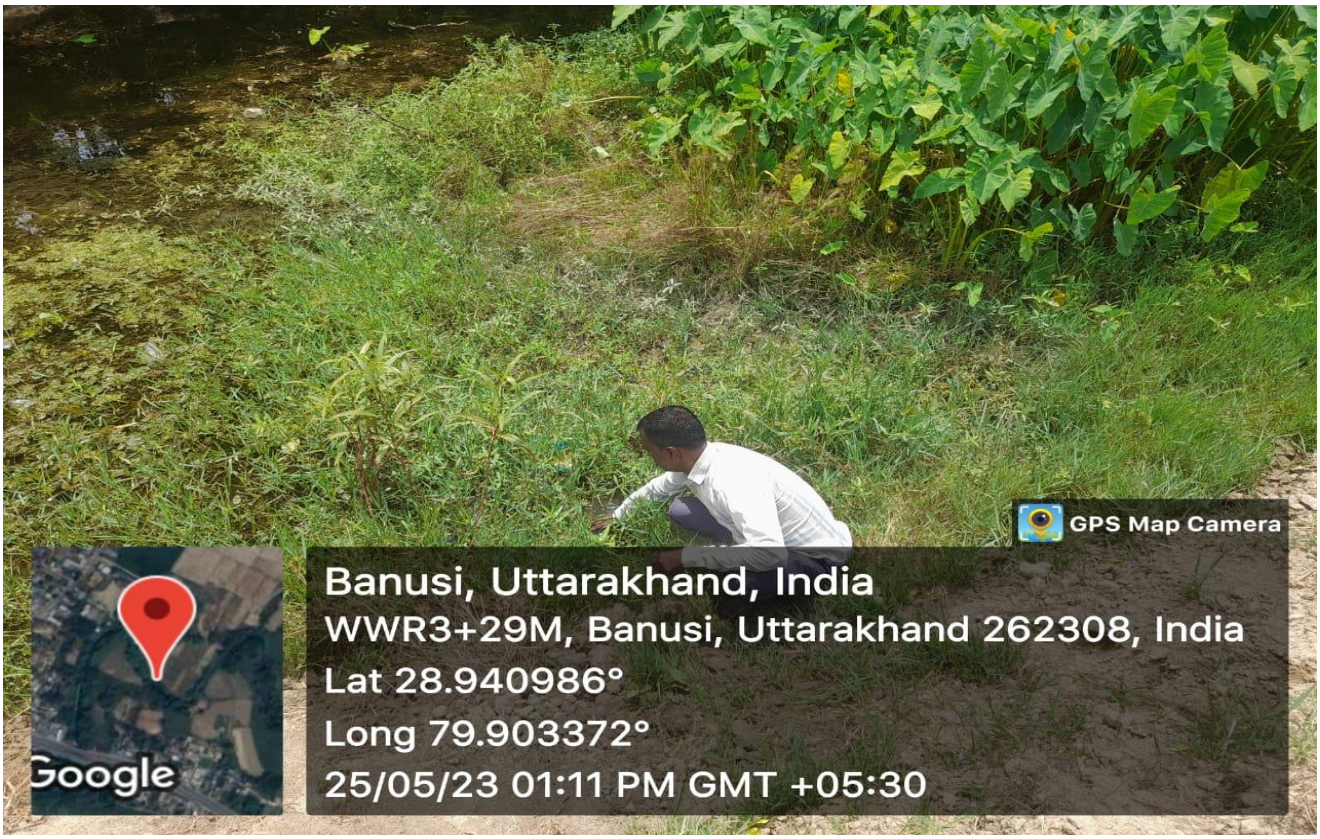

GPS Map Camera
Kashipur, Uttarakhand, India
6X48+QV5, Avas Vikas Colony, Kashipur, Uttarakhand
244713, India
Lat 29.206766°
Long 78.967191°
23/05/23 02:41 PM GMT +05:30
Google


GPS Map Camera
Gangapur Raqba, Uttarakhand, India
6W2C+W9W, Moradabad - Kashipur Rd, Gangapur Raqba,
Uttarakhand 244713, India
Lat 29.202349°
Long 78.920832°
23/05/23 01:11 PM GMT +05:30
Google

WATER MONITORING




GPS Map Camera
Udham Singh Nagar, Uttarakhand, India
WFH4+779, Uttarakhand 263148, India
Lat 28.927692°
Long 79.455956°
24/05/23 02:42 PM GMT +05:30
Google


GPS Map Camera
Banusi, Uttarakhand, India
WWR3+29M, Banusi, Uttarakhand 262308, India
Lat 28.940986°
Long 79.903372°
25/05/23 01:11 PM GMT +05:30
Google

SOIL MONITORING

ECON LABORATORY ACCREDITATION CERTIFICATE

ISO 9001:2015 (QMS)

Certificate

RCS CERT

THIS IS TO CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OF

ECON LABORATORY & CONSULTANCY

VILL: KHABARWALA, P.O. JAINTANWALA, NEAR GARHI CANTT, DEHRADUN, UTTARAKHAND-248003, INDIA

HAS BEEN INDEPENDENTLY ASSESSED IN ACCORDANCE WITH RCS PROCEDURES AND FOUND TO COMPLY WITH THE REQUIREMENTS OF

(QUALITY MANAGEMENT SYSTEM)

ISO 9001:2015

FOR THE FOLLOWING SCOPE:

PROVISION OF TESTING AND CONSULTANCY SERVICES

CERTIFICATION CALENDAR:

CLIENT ID: 5040

PLACE: DEHRADUN, UTTARAKHAND, INDIA

CERTIFICATE NO: UTK/IND-540/A0122

INITIAL REGISTERED DATE: 10.01.2022 ISSUANCE DATE: 10.01.2022

DATE OF EXPIRY: 09.01.2025

1ST SURV. DUE: 09.01.2023 2ND SURV. DUE: 09.01.2024

ACCREDITED Management System Certification

ISO 9001 CERTIFIED

CERTIFIED CERTIFIED CERTIFIED

Authorised Signature

To check this certificate status visit: www.thesasl.co.uk

REVOLUTIONARY CERTIFICATIONS SERVICES

27, Old Gloucester Street, London, WC1N 3AX, United Kingdom. Email:- info@rcscert.com

Validity of this certificate is subject to successful completion of surveillance audit on or before of due date.

In case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawal.

Certification Verification: Please check this validity of the certificate at:- https://www.thesasl.co.uk/certified-clients/ or www.thesasl.co.uk at Verify & then Certified Clients. This Certificate remains the property of RCS & shall be returned immediately upon request.

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

F. No. LB/99/7/2021-INST LAB-HO-CPCB-HO/ Pvt-305 13789 **Dated: 18th February 2022**

Speed Post

To,

The Chief Executive Officer
M/s ECON Laboratory and Consultancy
Vill.: Khabarwala, P.O.: Jaintanwala, Near Garhi Cantt.,
Dehradun, Uttrakhand-248003.

Subject: Recognition of M/s ECON Laboratory and Consultancy, Vill.: Khabarwala, P.O.: Jaintanwala, Near Garhi Cantt., Dehradun, Uttrakhand-248003as Environmental laboratory under the Environmental (Protection) Act 1986.

Sir,

I am directed to refer to your application dated 12/01/2022 for the recognition of your laboratory Environmental (Protection) Act, 1986. Based on the recommendations of the expert committee for recognition of Environmental laboratories in its 67th meeting held on 14th & 20th January 2022 and your acceptance of the revised terms and conditions at Annexure-III & IV of the guidelines for recognition of environmental laboratories, CPCB approves the renewal of recognition of **M/s ECON Laboratory and Consultancy, Vill.: Khabarwala, P.O.: Jaintanwala, Near Garhi Cantt., Dehradun, Uttrakhand-248003,** as shall be notified in the Gazette of India. **Considering the current validity of mandatory accreditation/ certifications of the laboratory, this recognition shall be valid up to 07/09/2023.**

2. As sought in your aforementioned **M/s ECON Laboratory and Consultancy, Vill.: Khabarwala, P.O.: Jaintanwala, Near Garhi Cantt., Dehradun, Uttrakhand-248003,** may undertake the following tests.

i. **Physical Tests-**Conductivity, Colour, pH, Fixed & Volatile Ssolids, Total Solids, Total Dissolved Solids, Total Suspended Solids, Turbidity, Temperature, Velocity & Discharge Measurement of industrial effluent stream, Odour, Salinity, Settleable solids and Sludge Volume Index (SVI).
ii. **Inorganic (General and non-metallic):** Acidity, Alkalinity, Ammoniacal Nitrogen, Chloride, Chlorine residual, Dissolved Oxygen, Fluoride, Total hardness, Total Kjeldahl Nitrogen (TKN), Nitrite Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate, Carbon Dioxide, chlorine demand, Sulphite, Silica and Sulphides.
iii. **Inorganic (Trace metals):** Boron, Cadmium, Calcium, Chromium Total, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium, Sodium Absorption Ratio, Zinc, Arsenic, Aluminium, Lithium, Manganese, Selenium and Cobalt.
iv. **Organics (General) and trace organics:** Bio-chemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Phenol, Pesticide (each) (Organo-chlorine and Organo Nitrogen-Phosphorus), Surfactants, Poly-chlorinated biphenyl (PCBs) each, Polynuclear aromatic hydrocarbons (PAHs) each and Organic Carbon (in solid).
v. **Microbiological test:** Total Coliform, Faecal Coliform, *Faecal Streptococci*, *E. coli* and Total Plate Count.
vi. **Toxicological Tests:** Bioassay method for evaluation of toxicity using fish and Measurement of toxicity factor using zebra fish (dimensionless toxicity test).

Contd.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032
दूरभाष/Tel : 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in

vii. **Biological Tests:** Benthic organism identification and count, Planktonic identification count, Chlorophyll.

viii. **Soil/sludge/Sediment and solid waste:** Boron, Cation Exchange Capacity (CEC), Electrical Conductivity, Nitrogen (available), Organic Carbon/matter (Chemical method), pH, Phosphorous (available), Phosphate (ortho), Phosphate (total), Potassium, SAR in soil extract, Sodium, Soil moisture, TKN, Calorific Value, Ammonia, Bicarbonate, Calcium, Calcium carbonate, Chloride, Colour, Exchangeable Sodium percentage (ESP), Heavy Metal, Magnesium, Nitrate, Nitrite, Potash (Available), Sulphate, sulphur and Water holding capacity.

ix. **Ambient Air/ fugitive emissions:** Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Total Suspended Particulate Matter, Respirable Suspended Particulate Matter PM_{10}, Ammonia, Carbon Monoxide, Chlorine, Fluoride, Lead, Ozone, Benzene Toluene Xylene (BTX), Polycyclic Aromatic Hydrocarbon (PAH) Benzo-a-pyrene & others and $PM_{2.5}$.

x. **Stack gases/ source emission:** Particulate Matter, Sulphur Dioxide, Velocity & Flow, Carbon Dioxide, Carbon Monoxide, Temperature, Oxygen, Oxides of Nitrogen, Acid mist, Ammonia, Fluoride (Particulate), Fluoride (Gaseous) and Hydrogen sulphide.

xi. **Noise level:** Noise level measurement (20-140 dba) and Ambient Noise and Source specific Noise.

xii. **Meteorological:** Ambient temperature, Wind direction, Wind speed, Relative Humidity and Rainfall.

3. Further, the following analysts have been approved for recognition as government Analysts.

   I. Dr. Pawan Kumar
   II. Dr. Mahadev Semwal

4. The laboratory shall compulsorily participate in the Analytical Quality Exercise conducted by the Central Pollution Control Board (CPCB) to ascertain the capability of the laboratory and analysis carried out and shall submit quarterly progress report to CPCB.

5. The surprise inspection/periodic surveillance of the recognized environment laboratory will be undertaken by CPCB to assess its proper functioning systematic operation and reliability of data generated at the laboratory.

6. It is also mandatory for the laboratory to have requisite accreditations of the ISO: 17025 (NABL) and ISO:45001 (OH&SMS) and its renewal as per accreditation rules. This recognition is subject to such accreditations and renewals as applicable. The laboratory is required to apply online for further renewal of recognition through CPCB web portal after renewal of the mandatory accreditations / certifications concerned.

7. The laboratory should compulsorily follow the accepted terms and conditions. In case of serious non-compliance of any of the terms and conditions, the laboratory may be black listed for a minimum period of two years and civil/criminal proceedings, as applicable, may be initiated for performing functions on behalf of the Government in an unauthorized manner.

Yours faithfully,

18/2/2022

(Namita Mishra)
Scientist-D & Divisional Head
Instrumentation laboratory

National Accreditation Board for Testing and Calibration Laboratories

NABL

CERTIFICATE OF ACCREDITATION

ECON LABORATORY AND CONSULTANCY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

VILL-KHABARWALA, POST-JAINTANWALA, GARHICANTT, DEHRADUN, UTTARAKHAND, INDIA

in the field of

TESTING

Certificate Number: TC-5507

Issue Date: 08/09/2021 **Valid Until:** 07/09/2023

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : Econ laboratory and Consultancy

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

Scan this code with your smart phone to verify the certificate

ISO 14001:2015 (EMS)

Certificate

RCS CERT

THIS IS TO CERTIFY THAT THE ENVIRONMENT MANAGEMENT SYSTEM OF

ECON LABORATORY & CONSULTANCY

VILL: KHABARWALA, P.O. JAINTANWALA, NEAR GARHI CANTT, DEHRADUN, UTTARAKHAND-248003, INDIA

HAS BEEN INDEPENDENTLY ASSESSED IN ACCORDANCE WITH RCS PROCEDURES AND FOUND TO COMPLY WITH THE REQUIREMENTS OF

(ENVIRONMENTAL MANAGEMENT SYSTEM)

ISO 14001:2015

FOR THE FOLLOWING SCOPE:

PROVISION OF TESTING AND CONSULTANCY SERVICES

CERTIFICATION CALENDAR:

CLIENT ID: 5040

PLACE: DEHRADUN, UTTARAKHAND, INDIA

CERTIFICATE NO: UTK/IND-55E/A0122

INITIAL REGISTERED DATE: 10.01.2022 ISSUANCE DATE: 10.01.2022

DATE OF EXPIRY: 09.01.2025

1ST SURV. DUE: 09.01.2023 2ND SURV. DUE: 09.01.2024

ACCREDITED
Management System Certification

ISO 14001 CERTIFIED

CERTIFIED CERTIFIED CERTIFIED

Authorised Signature

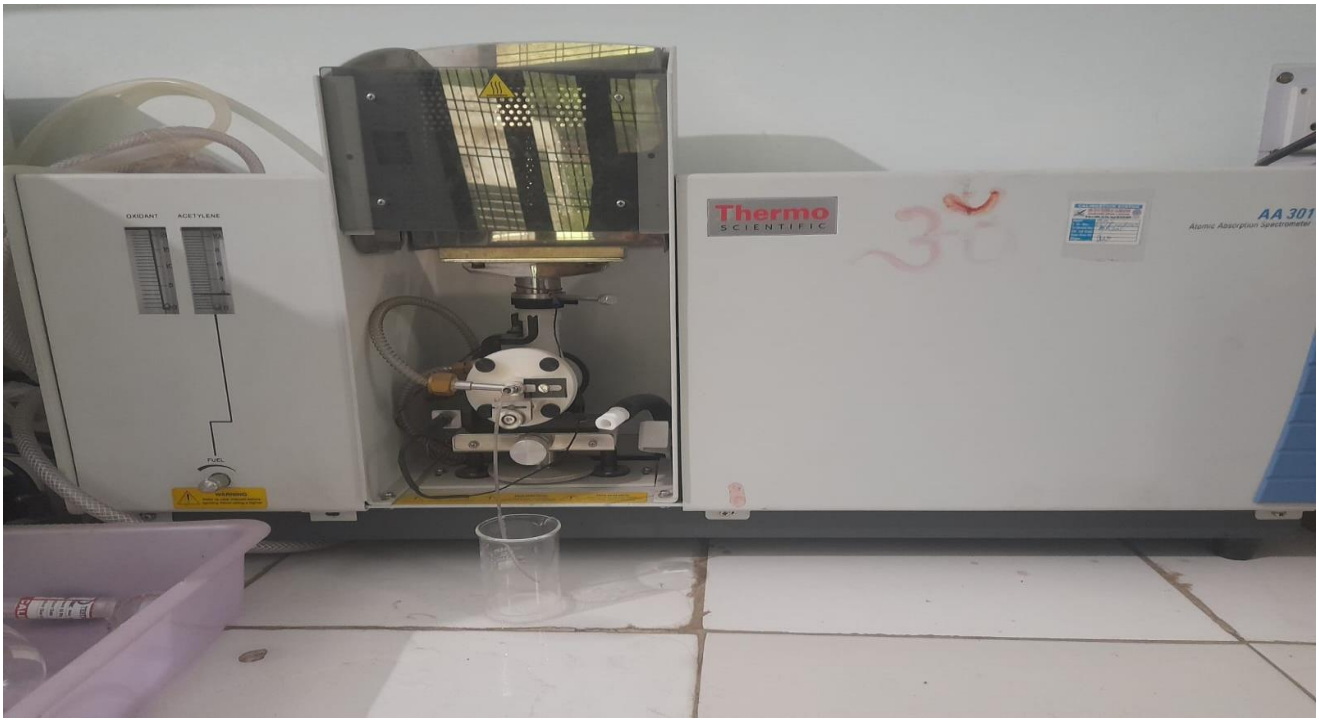
To check this certificate status visit: www.thesasl.co.uk

REVOLUTIONARY CERTIFICATIONS SERVICES

27, Old Gloucester Street, London, WC1N 3AX, United Kingdom. Email:- info@rcscert.com

Validity of this certificate is subject to successful completion of surveillance audit on or before of due date.
(In case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawal.)
Certification Verification: Please check this validity of the certificate at:- https://www.thesasl.co.uk/certified-clients/ or www.thesasl.co.uk at Verify & then Certified Clients. This Certificate remains the property of RCS & shall be returned immediately upon request.

LAB PICTURES



Conclusion:

Econ Laboratory & Consultancy,Dehradun has completed the project of Environmental Monitoring of Existing UPCL & Baseline Data generation of proposed ADB funded project UTSDIP.in stipulated time and found the environmental conditions in each areas are within limit. Monitoring has been conducted as per CPCB Guideline to about 36 different location of Uttrakhand.