

Data Interpretation of Air:

Core zone:

The mean value of PM_{2.5} is 46.64µg/m³, PM₁₀ is 86.79µg/m³, SO₂ is 11.78µg/m³, NO₂ is 21.83 µg/m³ & CO is 0.62 mg/m³ and 0.57 mg/m³. Concentration of PM_{2.5}, PM₁₀ SO₂, NO₂& CO is found to be within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB the air quality of the buffer zone is found to be good.

Data Interpretation of Noise

Day time Noise Level

- Noise levels during day time was observed to be 53.7 dB (A).
- **Night time Noise Levels**
- Noise levels at night time was observed to be 45.2 dB (A).

The site falls in commercial area.

Data Interpretation of Ground water

The Groundwater quality at location shows that:

- ❖ TDS of sampling location was not found within the drinking water standards (IS:10500) i.e.500 mg/l. The Total dissolved solids in the ground water is associated with elevated hardness resulting in water being bitter or salty, thereby causing corrosion. High TDS maybe because of overexploitation of groundwater, leaching of soil salts, or percolation of domestic sewage into the groundwater.
- ❖ Total Hardness of the sampling location was found higher than the drinking water standards (IS:10500) i.e. 200 mg/l. The hardness contributed possibly due to seepage and running off from soil. Hardness is normally considered an aesthetic water quality factor because of the unpleasant taste that a high concentration of calcium and other ions give to water. It reduces the ability of soap to produce lather and cause scale formation in pipes and plumbing fixtures.
- ❖ Alkalinity of the sampling location was found higher than the drinking water standards (IS:10500) i.e. 200 mg/l possibly due to bicarbonate released through dissolution of carbonate minerals, seepage and run off from soil. Anthropogenic sources of alkalinity such as domestic waste can be the contributing factor for the increased alkalinity. High levels of alkalinity lead to objectionable taste, or precipitation of scale in pipes and containers. Chronic effect being necrosis of cells.
- ❖ The Calcium. Calcium levels of sampling location was not found within the drinking water standards (IS: 10500) i.e. 75 mg/l.

- ❖ The Magnesium-Magnesium levels of sampling location was not found within the drinking water standards (IS:10500) i.e. 30 mg/l. Magnesium at high concentration contributes to undesirable taste and may have a laxative effect.
- ❖ The Chloride: The chloride level for the sampling location was found within the drinking water standards (IS: 10500) i.e. 250 mg/l. Chloride increases the electrical conductivity of water and thus increases its corrosivity. In metal pipes, chloride reacts with metal ions to form soluble salts, thus increasing levels of metals in drinking-water

Data interpretation of Soil

Soil Core Zone:

- The results of the soil quality analysis shows that the soil texture in the core zone is Sandy Clay loam, pH is 6.87, Electrical conductivity is the measure of the salt content in the region. EC for the core zone is 536.8 $\mu\text{S}/\text{cm}$.
- Amount of primary nutrients like Organic matter is 1.20 %, the available nitrogen is 0.067%, and available Potassium is 135.14 mg/kg while the available Phosphorus is 47.71mg/kg. Primary nutrient profile shows that soil is average fertile in the Core Zone.