In this application, the concentration of organics would be measured at the outlet of the carbon filter to monitor the correct performance. Typically, readings would be less than 1 mg/litre and the low range monitor would be used for this application.

Suitable valving and/or pressure reduction equipment may be necessary, depending on the particular plant conditions.
Why use UV Absorption Monitors on a Carbon Filter

- To determine when the carbon filter needs replacement carbon powder.
- To measure the effectiveness of the treatment plant.
- To monitor the final water as a further verification of water quality.
- To monitor the efficiency of the carbon filter.
- To protect against breakthrough of organisms in the final water.
- To ensure compliance with drinking water standards.

Why use ABB Instrumentation?

- Utilises auto cleaning to prevent optical fouling.
- Works reliably even with high levels of manganese and iron in the sample.
- Stable, no-drift performance – performance verification is minimal.
- Long life light source – up to 10 years.
- Fixed trials have demonstrated the effectiveness of this analyzer on this application.
- No reagents or consumables (i.e. pump tubing) required – virtually no running costs.

What ABB Products are Suitable?

- 7320/1000 Complete System, which operates over the range 0 to 10 mg/l, with a minimum range of 0.2 mg/l.
Monitoring the Water after the Carbon Filters in Potable Water Treatment

Associated ABB Products for use in Potable Water Treatment Plant

- Turbidity on raw water, after the clarifiers, after the filters and final water.
- pH control of the coagulation process.
- pH of raw water and of final water.
- Ammonia on raw water intake and on final water.
- Fluoride monitoring.
- Phosphate monitoring on final water.
- Nitrate monitoring of intake and final water.
- Flow measurement and recording.

Installation

- Avoid air bubbles by regulating the flow down stream of the monitor.
- Ensure the flow rate is within the limits stated in specification sheet.
- Ensure there is sufficient space to allow easy access to the wiper motor, the light source and the receiver.
- Ensure there is sufficient head room to make calibration a convenient procedure.

Note. The flow indicator is not essential for optimum system performance.
Comparison of Colour/UV Absorbton

Graph showing analyzer results against laboratory T.O.C. analysis which demonstrates the strong and consistent relationship between the two measurements. By applying a coefficient factor it is possible to use the UV measurement as a cost effective surrogate measurement for T.O.C. where site conditions are suitable.
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The Company’s policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

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