

Turbidity Monitoring System

____ (Quantity) Turbidity Monitors shall be supplied for continuous monitoring of turbidity in ____ (Specify Application and Location) ____ . The turbidity monitoring system shall consist of an electronic monitor, sensor and accessories listed below. The Turbidity Monitoring System shall be ATI Series A15/76 as described below.

Turbidity Monitor

The Turbidity Monitor shall be a compact ¼ DIN size instrument suitable for panel mounting. For outdoor applications, the monitor shall be supplied in a NEMA 4X enclosure with a clear hinged door to allow tool-less access to controls and for viewing the LCD display. The display shall be alphanumeric LCD and capable of indicating turbidity in NTU's (Nephelometric Turbidity Units) in a range up to 4000 or selectable in mg/l to a range up to 9999. Alarm condition, setpoints and all configuration information shall be programmable through a front keypad with a software lock protecting configuration programming, with an access code.

The monitor shall provide two independently programmable alarm/control relays assignable over the entire measuring range of the instrument as either low or high alarm. In addition, both relays shall be programmable for variable deadband and variable time delay. A third independent alarm relay shall be provided having two setpoints, one for low conductivity level and one for high level. This alarm relay shall activate if either of the setpoints are exceeded.

The monitor shall provide sensor diagnostic functions to warn of conditions that cause inaccurate or invalid readings and to continuously monitor for optical fouling of the sensor, displaying an alarm message when the sensor requires cleaning.

An isolated 4-20 mA analog signal shall be provided, adjustable to any range within the display scale and suitable for loads up to 600 ohms.

Turbidity Sensor

The turbidity sensor shall employ a bright LED light source producing an infrared light beam, and located behind an optical lens focused into the process at a 45° angle with a photo receiver also focused at 45°. The light is then scattered at a 90° angle by the particles. Sensors shall be available for direct immersion, in-line flow applications or self-cleaning. Sensor shall be made of Delrin and have clear Acrylic optical windows.
