LPP Monitoring

Low Pressure Pipe Monitoring Visit

The following is intended as a guide to monitoring a LPP system. It is in no way all inclusive. Your monitoring will vary according to the operation permit for the specific system.

1. Contact owner to inform them of the visit and to meet you there if they choose.
2. Review file information. Familiarize yourself with the system and any past visits.
3. Upon arrival, disconnect the power to the pump and survey the entire system to check for obvious signs of damage.
4. Once everything is found to be intact, begin running water into the pump water reaches the level to activate the control float, disconnect the power, turn the water off, and take a reading of the water level. This reading is recorded in the **Float On** black on the monitoring form. Continue running water into the pump tank until there is a sufficient volume for pump drawdown and flushing of laterals.
5. Remove the access riser lid and the manhole lid on the septic tank. Using the ***Sludge Judge***, determine the depth of sludge, the depth and quality of effluent, and depth and any observations about the scum layer in the septic tank. Check for infiltration of surface water into the septic tank. Note any indication of exfiltration of effluent from the septic tank. Listen for any water entering the septic tank through the house plumbing. Record this information on the monitoring form.
6. Using the ***Sludge Judge***, determine the depth and quality of effluent in the pump tank. Check for infiltration of surface water into the pump tank. Note any indication of exfiltration of effluent from the pump tank. Record this information in the appropriate blanks on the monitoring form.
7. Raise the alarm float to determine if it functions properly, note its location and record the information in the appropriate blanks on the monitoring form.
8. Record the design head pressure and the design gallons per minute (gpm) in the appropriate blanks on the monitoring form. Using the clear plastic tubes, set the design head on the appropriate lateral(s). Shut the water off and measure the water level. Record the reading on the **Pump On** blank on the monitoring form.
9. Turn the pump on, start the watch, and adjust the control as necessary to regulate the pressure to the design head. Run the pump for a given period of time, usually five minutes. Turn the pump off, stop the watch, and measure the water level. Record the water level reading in the **Pump Off** blank and the elapsed time in the **Min.** blank. Subtract the two water level reading and record the inches of drawdown in the blank. Multiply the inches of drawdown by the gallons per inch of the pump tank and divide the result by the elapsed time. Record this number in the **Measured GPM** blank.
10. Open the control valve wide open be sure to count the number of turns. Remove the clear plastic tubes from the turn-ups and replace the end caps. Remove one end cap at a time, turn the pump on and flush the lateral to remove any solids that may have accumulated. Observe the material that is flushed out and record any comments on what was flushed out in the **Comments** section of the monitoring form.

11. Position the control valve to the proper setting and record where the pressure at which the system was left.
12. During the flushing of the lines, the control float should cut the pump off. Measure the water level and record the number in the **Float Off** blank on the monitoring form. Subtract the **Float On** from the **Float Off** and record the number, inches dosed, in the blank. Multiply the inches dosed by the gallons per inch of the pump tank. This is the dosing volume. Record the number in the **Gallons Dosed** blank on the monitoring form.
13. Record the following information in the appropriate blanks on the monitoring form.
    a. Presence of a vent hole (antisiphon hole)
    b. Presence of a union
    c. Presence and functioning of a check valve
    d. Presence, type, functioning and location of a isolation valve
    e. Type, functioning, location and tether length of the control float(s)
    f. Number, type and functioning of the pump(s)
    g. Accessibility, type, functioning and condition of the electrical controls
    h. Number, type, location accessibility, and condition of field valves
    i. All laterals and end caps located, numbered and condition
    j. Effluent surfaced during dosing cycle
    k. Settling over lateral lines or manifold trench
    l. Type and condition of vegetation
    m. Comments about site drainage
    n. Any damage
    o. Tax map number and permit number
    p. Name, address, and phone number of the owner
    q. Name, certification number, address, and phone number of the operator