

GILES CHEMICAL CORPORATION		
COMPANY PROCEDURE		
Standard Operating Procedure	Page : 1 of 3	Revision : Date : 2/8/2006
Author: Patrick Owen	Title: (00) Replacing a pH Probe Cable	

Personnel responsible:

1. Technical

Safety equipment:

Safety glasses and safety shoes. Sulfuric acid is in use in the Digesters, take necessary precautions to prevent contact.

Summary:

Sometimes the cable for the pH probe may need to be replaced. This procedure informs you how to do it.

Procedure:

Removing the Old Cable

1. Inform the Lead Operator of what you are doing.
2. Stop the Digester (see the procedure for this)
3. Unplug the pH Meter.
4. Using a screwdriver, unscrew the 4 screws on the pH meter readout.
5. Loosen the black plastic strain relief that the pH cable goes through.
6. Using a screwdriver, remove the black plastic "ESD Shield"
7. Using a small screwdriver, loosen all cable connections.
8. Gently pull the wires loose from the readout and pull the cable completely loose.
9. Disconnect the probe from the cable.
10. Remove the "witch's hat" from the old cable.

Threading Up the New Cable

11. As a minimum, align the wires of the new cable together. Preferably wrap the ends with electrical tape.
12. Put the "witch's hat" on the new cable.
13. Push the wires up through the strain relief into the meter box.

Making Electrical Connections

14. The panel is labeled for the wires, so the following convention matches the panel.
15. Connect the large Green and Yellow wire to "shield".
16. Connect the small Green wire to "RTD D". The letter D will be in a box.
17. Connect the small White wire to "RTD E". The letter E will be in a box.
18. Connect the large Black wire to terminal 1, "meas el."
19. Connect the small Red wire to terminal 2, "ref el."
20. Connect a jumper from terminal 2 to terminal 3 – this puts two wires in terminal 2.
21. Tighten all connections.
22. Clip the small blue and small gray wires and tape the ends.
23. Gently squeeze the wires to the side and replace the "ESD Shield"

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Closing up the Box

24. Gently tug on the cable as you close the box to take out the slack. Be very careful about bending the cable too sharply because it is very weak at this end.
25. Close the box and tighten the screws on the face of the panel.
26. Tighten the black plastic strain relief.
27. Connect the new cable to the probe.
28. Plug in the pH Meter
29. Calibrate if necessary.
30. Start the Digester.

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REVISION HISTORY

<u>Revision Date</u>	<u>Revision Number</u>	<u>Revision Description</u>
2/8/06	0	New Document