

GILES CHEMICAL CORPORATION		
COMPANY PROCEDURE		
Standard Operating Procedure	Page : 1 of 4	Revision : 5/21/06 Date : 3/6/06
Author: Carl Mooney, Jr.	Title: pH Meter Calibration for Digesters	

MANUF-TECH-04

Safety: Observe all area safety rules, in addition to wearing the proper PPE for testing.

Purpose: To outline steps to calibrate the pH meters on the plant digester.

Procedure:

This calibration procedure should be conducted during the morning and checked in the afternoon if a new probe was installed.

1. Equipment:
 - a. 3 – 250 ml Plastic Beakers
 - b. Calibration buffers pH 4, and 7
 - c. Deionized water
 - d. pH meter with electrode
 - e. wipes or tissue
2. Set-up and procedure
 - a. Inform the lead operator that you are going to calibrate the pH probes on the digesters.
 - b. Follow Technical procedure MANUF-TECH-01, stopping the digester.
 - c. Pour buffers and water in the beakers
 - d. After stopping the digester, remove the probe from the holder, clean with DI water and brush and wipe dry with tissue.
 - e. Place in 4 buffer and observe the reading.
 - f. Press the Cal button on the controller box.
 - g. “0000” should appear in the screen. The first 0 is blinking
 - h. Press the up arrow to enter 1, then press horizontal arrow, the next 0 blinks, press the up arrow again and the readout should now show “1100”, now press enter.
 - i. Cal-1 appears on the screen. Since the probe is in pH 4 buffer already just press enter.
 - j. The meter should read the buffer for pH and mv after completing the process the meter will show Cal-2
 - k. Remove the probe from the pH 4 buffer solution, rinse with clean DI water, dry with a tissue, then place in pH 7 buffer.
 - l. Press enter then reads the pH and mv. After completing the test, the slope will appear on the screen. 90% and above is acceptable. 85 to 89% must discuss with Technical. Below 85% troubleshoot the system and replace the probe.
 - m. After successfully calibrating press enter two times.
 - n. Observe the reading in the buffer solution.
 - o. Remove probe from buffer solution and rinse with DI water.
 - p. Insert the probe back in the holder and check pH reading against the pH paper.
 - q. Follow the procedure to restart the digester.
 - r. Inform the Lead operator that you have completed the calibration.

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- s. To calibrate the pH probes on the second digesters, stopping the digester is not required – just follow steps e-p.
- t. Conduct this calibration procedure at lease weekly, or as often as needed.

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REVISION HISTORY

<u>Revision Date</u>	<u>Revision Number</u>	<u>Revision Description</u>
3/6/06	00	New Document
5/21/06	01	Statement when to conduct calibration

TRAINING DOCUMENTATION

	EMPLOYEE	TITLE	SIGNATURE	DATE
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