

GILES CHEMICAL		
COMPANY PROCEDURE		
Standard Operating Procedure	Page : 1 of 3	Revision : 7/15/2008 Date : 12/01/2005
Author: Patrick Owen	Title: (01) Starting and Stopping the Digesters	

**Personnel responsible:**

1. Lead Operator, Material Handler

**Safety equipment:**

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

**Summary:**

Starting and Stopping the Digesters is a routine occurrence. However, starting the Digesters can cause problems if MgO is started before the Digesters are acid. The MgO can form “rocks” of oxysulfate cement which can cause the circulation loop to stop.

**Warning – the acid will not run if the circulation loop is flowing less than 60 gallons per minute. Make sure the circulation loop is running properly before starting the digester.**

**Procedure:**

**1) STARTING A DIGESTER**

- a) Check that the circulating line is operating, the pH meter is reading properly, and the agitator is on.
- b) Open the Mix Pot Water Supply valve. Check for water going into the mix pot.
- c) Open the Acid Control Shutoff valve.
- d) Wait until the pH in the primary digester goes below 5.00 before starting the MgO.
- e) On the #2 Side, Start the Short MgO Screw and the Long MgO Screw.
- f) Turn the MgO Feed Drive switch on and adjust the dial as needed
- g) Check to see that the MgO is flowing into the mix pot.
- h) Open the Density Control Shutoff valve.
- i) Slightly open the Mother Liquor Feeder valve.
- j) Close the Mother Liquor Recirculation valve and adjust flow with the Mother Liquor Feeder valve to about half of the TOTAL feed to the Crystallizer (15-20 gpm).

**2) SHUTTING DOWN A DIGESTER**

- a) Open the Mother Liquor Recirculation valve.
- b) Close the Mother Liquor Feeder valve.
- c) Stop the MgO Feed Drive.
- d) On #2 Side, stop the Short MgO Screw and the Long MgO Screw.
- e) Close the Acid Control Shutoff valve.
- f) Allow the liquid in the mix pot to clear up.
- g) Close the Mix Pot Water Supply valve.
- h) Close the Density Control Shutoff valve.

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## TRAINING DOCUMENTATION

	EMPLOYEE	TITLE	SIGNATURE	DATE
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### REVISION HISTORY

Revision Date  
07/15/2008

Revision Number  
01

Revision Description  
 -Add warning about acid  
 Stopping if circulation  
 Loop is slow  
 -Added wording for  
 Monitoring System  
 -Changed heading for  
 Giles Chemical  
 -Added revision pg.