

GILES CHEMICAL CORPORATION		
COMPANY PROCEDURE		
Standard Operating Procedure	Page : 1 of 3	Revision : 12/15/2005 Date : 11/10/2005
Author: Patrick Owen	Title: (00)Crystallizer Operations	

Manuf-Crys-01

Personnel responsible:

1. Lead Operator, Material Handler

Safety:

Safety shoes and safety glasses are required when working in, on, or around the crystallizers.

Summary:

Crystallizer operation is simple under most circumstances, usually just monitoring the parameters and making small adjustments to the flows. It takes a very long time to make a large change to a crystallizer, so care should be taken so as not to try to change things too quickly. Small adjustments are the key.

1. Normal operation (the limits are on the log sheets, and the other specifications are on the Standard Operating Conditions for each tonnage):
 - a) Operators regularly check and record the following in the log:
 - b) brine feed rate
 - c) brine feed specific gravity
 - d) fine salt loop operating;
 - e) brine tank level;
 - f) mother liquor feed rate
 - g) mother liquor tank level;
 - h) Crystallizer body temperature
 - i) Crystallizer contents specific gravity
 - j) level of contents in Crystallizer
2. Correcting the Process:
 - a) If the level gets too high, increase the speed of the discharge pump or slow the feed of brine and mother liquor.
 - b) If the level gets too low, decrease the speed of the discharge pump or increase the feed of brine and mother liquor.
 - c) If the specific gravity or solids reading gets too high, increase the mother liquor ratio to brine, keeping the total gpm the same.
 - d) If the specific gravity or solids reading gets too low, decrease the mother liquor ratio to the brine, keeping the total gpm the same.
 - e) If the temperature goes high or low, technical assistance may be needed.

GILES CHEMICAL CORPORATION			
COMPANY PROCEDURE			
Standard Operating Procedure		Page : 2 of 3	Revision : 12/15/2005 Date : 11/10/2005
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Manuf-Crys-01

	EMPLOYEE	TITLE	SIGNATURE	DATE
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GILES CHEMICAL CORPORATION		
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Standard Operating Procedure	Page : 3 of 3	Revision : 12/15/2005 Date : 11/10/2005
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Manuf-Crys-01

REVISION HISTORY

<u>Revision Date</u>	<u>Revision Number</u>	<u>Revision Description</u>
11/28/05	00	New Document
12/15/05	01	Update from Operators Training