Chemistry - PI 24

HEAVY WATER PRODUCTION - ENRICHING

Objectives

1. List the five stages of treatment of lake water for use in the GS enriching process (screening, filtration, acid addition, de-gassing, neutralization). In a sentence or two for each, state the purpose of each step.

2. Briefly describe the effects of:

   (a) Oxygen

   (b) Elemental sulphur

   (c) Iron sulphide formation on the process or equipment.

In module 11-2 we discussed the chemistry of isotopic separation of heavy water from "light" water feed. This module is to give you an understanding of the preparation of feed to that process and a feel for a few of the potential operating problems.

Here's What To Do:

1. Obtain a copy of Course 438 and read Lesson 438.21-1.

2. Fill in the work sheets on the next pages.

3. Have the Course Manager check your work sheets.

WORKSHEET 1

FEED TREATMENT FOR BHWP ENRICHING PROCESS

STEP	PURPOSE
1. Screening	
2. Filtration	
3. Acid Addition	
4. De-gassing	
5. Caustic Addition (Neutralization)	

WORKSHEET 2

Briefly describe the problems in the BHWP enriching process associated with:

1. Oxygen

2. Elemental Sulphur

3. Iron Sulphide Formation

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