

36 INCH TELESCOPE FLOOR HYDRAULIC FLUID

Subject: Mt Ham 36" Hydraulic System
Date: Fri, 7 May 2004 10:51:17 -0700
From: "Dan Blunk" <blunk@ucsc.edu>
To: <Surfcrowe@aol.com>
CC: <shankle@ucolick.org>

Steve,

I'm sending you some background info, below.

I've taken a look at the Chevron soluble oil B product lit and MSDS (attached pdf files).

The product is petroleum based, and it's considered a hazardous material.

During a regulatory inspection, the Santa Clara County EHS Inspector told Sam that the 36" floor hydraulic system should have secondary containment (I wasn't present).

As the installation of 2ndary containment for the hydraulic system would be very expensive, the idea was to find a replacement hydraulic fluid mixture that would not require secondary containment.

If dilute enough, we may be able to convince SC County that an aqueous mixture of your present Soluble Oil B doesn't require 2ndary containment. The product literature for this material states that it can be used as a corrosion inhibitor at a 1:50 dilution (2% solution). It's my understanding that we are currently using a 10% solution of the soluble oil in the hydraulic system. Do you think we could reduce that to a 2% solution? If so, I could try to persuade Santa Clara County that containment would not be necessary for a 2% solution. I don't think the County would agree to using a 10% solution without containment. If a 10% solution is our only reasonable option however, we can certainly try to dissuade them from requiring containment.

Since we're interested in an aqueous corrosion inhibitor, we might also try contacting a water treatment vendor (UCSC uses Garratt-Callahan in Millbrae – their number used to be 415.697.5811). If you identify one or more system additives that you feel would be operationally acceptable, I'll take a look at them with respect to their hazardous characteristics.

Let me know what you think,

Dan

Note:

We have adopted this plan of action and are using a 2% solution of Soluble Oil B and it appears that after several years of operation the system has an adequate amount corrosion resistance and lubrication.

Darrell Severinsen
Telescope Operations Manager