
From: Barylski Doug J NSSC
To: Fink Jeff E NSSC
CC: Hunstad Mary P NSSC; McCrory Dennis M NSSC
Sent: 11/9/2001 7:01:44 PM
Subject: FW: AFFF: Sky is not falling

Jeff, here is a write-up Jim Hill put together on AFFF that briefly synthesizes what's going on. Please contact us regarding AFFF issues, and ignore anything that does not come from us, especially anything not written. It is becoming cumbersome to continue to answer the same old rumor.

Bottom line is, the "PFOS" environmental issue applies to only one manufacturer among many. However, we should obtain research funds in POM 04 to begin getting into the AFFF environmental issue before it becomes a crisis. We have already determined that the primary threat for which we need a high-performance firefighting agent like AFFF is an aircraft crash on a carrier flight deck.

R/DB

-----Original Message-----

From: Hill, Jim [mailto:jhill@mrosenblatt.amsec.com]
Sent: Thursday, November 08, 2001 11:36 AM
To: BarylskiDJ@navsea. navy. mil (E-mail)
Subject: Sky is not falling

Doug,

Yesterday I was at a CVNX meeting, when suddenly the question of continued availability of AFFF came up. The IPT chairman (Jeff Fink) said he still thought the sky was falling, based on what he had heard last. He asked me to send him a few sentences with the current situation. Mary said I should chop my sentences past you first. So..... do you agree with the following?

Jeff,

All AFFF fire fighting agents contain fluorinated surfactants. They are a key ingredient that provides AFFF with the low surface tension and fast spreading coefficient that enables film formation on top of fuel.

The chemicals used to produce fluorinated surfactants in AFFF are produced by two methods: electrochemical fluorination and telomerization. The electrochemical method is the cheaper of the two.

The electrochemical process creates an intermediate chemical type known as perfluorooctyl sulfonate (PFOS). EPA has conducted a hazard analysis and found that PFOS is persistent, bioaccumulative, and toxic. EPA is proposing that rules be established to block the future manufacture and import of PFOS. This rule has not been enacted yet, but the 3M company has voluntarily agreed to end manufacture of PFOS by 31 Dec 2002. This means no more AFFF from 3M company unless they shift to a different manufacturing process or product formulation.

AFFF that is manufactured using the telomerization process does not contain PFOS. There are about 4 other US manufacturers of AFFF which use the telomerization process; three of these have products qualified to Mil-F-24385 and are already on the QPL. Telomers are persistent, however, and EPA has "concerns." The big chemical companies have funded a "Telomer Research Program" to study the effects of telomers on humans and the environment; this is a 2-3 year program.

So, the AFFF sky is not falling--yet. EPA cannot ban AFFF under the Toxic Substances Control Act. There are approved alternatives to the 3M brand of AFFF. If something bad is discovered about the other brands or EPA starts to push for regulations affecting AFFF, there appears to be 3-5 years of lead time to come up with a plan. But do not underestimate the severe nature of the risk: there is a very tight relationship between the JP-5 fuel, the flight deck fire hazard, the AFFF extinguishing agent, and the fire extinguishing tactics. If any of these things change, all the others must be adjusted.

--J. Hill

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