To: Alwood, Jim[Alwood.Jim@epa.gov]; Schweer, Greg[Schweer.Greg@epa.gov]
From: Moss, Kenneth
Sent: Wed 1/22/2014 6:29:54 PM
Subject: RE: EDF blog post: Another new wrinkle on the "new" mystery chemical in West Virginia spill

Gino mentioned this – jeez.

Kenneth Moss
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From: Alwood, Jim
Sent: Wednesday, January 22, 2014 1:28 PM
To: Moss, Kenneth; Schweer, Greg
Subject: FW: EDF blog post: Another new wrinkle on the "new" mystery chemical in West Virginia spill

Do you folks get Denison's blog? There were glycol ethers in the mess. On top of everything else it would explain the potential developmental toxicity.

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From: Richard Denison [mailto:rdenison@edf.org]
Sent: Wednesday, January 22, 2014 12:48 PM
To: rdenison@edf.org
Subject: EDF blog post: Another new wrinkle on the "new" mystery chemical in West Virginia spill

http://blogs.edf.org/health/

Another new wrinkle on the "new" mystery chemical in West Virginia spill

By Richard Denison | Bio | Published: January 22, 2014

Richard Denison, Ph.D., is a Senior Scientist.

Well, this story is rapidly evolving! Even since my last blog post this morning, new information has come to light as to the identity of the "new" chemical that was present in the leaking tank that led to contamination of the drinking water in Charleston, WV.

The *Charleston Gazette has now reported* that Freedom Industries, the owner of the leaking tank, has told government officials that the "new" chemical is actually a mixture of two chemical products, both of them made by The Dow Chemical Company. One of those is in fact the "DOWANOL™ PPh Glycol Ether" I discussed in my last post. The second is a closely related Dow product called "DOWANOL™ DiPPh Glycol Ether." (These links are to Dow's Material Safety Data Sheets (MSDSs) for the two products.)

The first product consists almost entirely (>99.5%) of propylene glycol phenyl ether (CAS no. 770-35-4). The second is a mixture (see its MSDS), the main component of which (≥60%) is *di*-propylene glycol phenyl ether (CAS no. 51730-94-0) – a closely related chemical.

My earlier post indicated that a Dow contact had told me this morning it does not make a "stripped" version of its PPh product, and hence did not believe it was the supplier of the material to Freedom Industries. As I noted in that post, use of the "stripped" designation to

describe the "proprietary" chemical listed in the MSDS supplied yesterday by Freedom Industries for the "new" chemical had suggested the substance had somehow been further distilled.

But the latest article in the *Charleston Gazette* helps to clarify the situation. It cites State officials indicating that Freedom Industries' "PPH, stripped" is in fact a mixture of the two Dow products.

Interestingly, the MSDSs for the two Dow products reference a considerably larger amount of toxicity data than does Freedom Industries' MSDS. It appears, therefore, that there may be more data for officials to go on to assess potential risks associated with this "new" chemical.

Dow's Technical Data Sheet and Product Safety Assessment for "DOWANOL™ PPh Glycol Ether" list several uses for the product, none of which appear to explain why Freedom Industries would have added the product to the tank of MCHM, which is used to wash coal.

There appear to be some disconnects between Dow's knowledge of how its own chemicals are being used and by whom, and also between the intended uses of such chemicals and their actual use. These disconnects point to flaws in our current chemical safety policies: chemical manufacturers often don't have a full picture of how their chemicals are actually used, and downstream users may not have a clear picture of which uses of a chemical are appropriate or not.

The number of lessons to be drawn from this West Virginia chemical spill appears to be growing by the day.

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