To: Flattery, Priscilla[Flattery.Priscilla@epa.gov]
From: Kaiser, Sven-Erik
Sent: Tue 1/28/2014 2:42:46 PM
Subject: RE: Sen. Rockefeller Followup Inquiry on WV Chemicals

Priscilla,

Am I ok to forward this to my colleague Carolyn Levine and have her call you or Tracy if questions? I see this is a lot of info. Thanks,

Sven

Sven-Erik Kaiser

U.S. EPA

Office of Congressional and Intergovernmental Relations

1200 Pennsylvania Ave., NW (1305A)

Washington, DC 20460

202-566-2753

From: Flattery, Priscilla
Sent: Tuesday, January 28, 2014 9:26 AM
To: Kaiser, Sven-Erik
Subject: FW: Sen. Rockefeller Followup Inquiry on WV Chemicals

Call me when you have a moment to discuss

Priscilla Flattery

Chief of Staff, OPPT

202-564-2718

From: Williamson, Tracy

Sent: Monday, January 27, 2014 7:14 PM
To: Flattery, Priscilla; Henry, Tala
Cc: Morris, Jeff; Widawsky, David
Subject: RE: Sen. Rockefeller Followup Inquiry on WV Chemicals

This is what I just sent today on PPH and PPV (in response to separate email)…

"PPH" can be used to mean a class of propylene glycol phenyl ethers. These are aromatic glycol ethers which are different than simpler ethylene glycol and propylene glycol ethers that others may be referring to. The two PPHs referenced the most in the press are likely…

Propylene glycol phenyl ether (PPH) (CASRN 770-35-4, "2-Propanol, 1-phenoxy-")

- Lots of potential uses including as frothing agents in coal processing (washing)
- On the TSCA Inventory (non-CBI); put on the original Inventory (so not a PMN)
- 3 public CDR reports with a National PV of 208,306 lb/yr
- References:

o National Library of Medicine: http://chem.sis.nlm.nih.gov/chemidplus/rn/770-35-4

o CA Air Resources Board: http://www.arb.ca.gov/consprod/regact/2010ra/pph770354.pdf

di-Propylene glycol phenyl ether (di-PPH) [CASRN 51730-94-0, "Propanol, 1(or 2)-(methyl-2-phenoxyethoxy)-"]

- Lots of potential uses including as frothing agents in coal processing (washing)
- On the TSCA Inventory (non-CBI); put on as a commenced PMN; no regulatory flags associated with it
- No public CDR reports

PPHs have lower volatility and water solubility than simpler glycol ethers. There's not much

information on them, but we'll keep looking.

"PPV" can be used to mean a class of poly phenylene-vinylene ethers. There could be numerous chemicals in this class. We'll do a search on the TSCA Inventory to come up with a TSCA list.

This is what EETD provided last week to OGC at their request when PPH first surfaced…

There is no real "mystery" to any of the chemicals reported in the press as far as we can tell. As a "full service producer" of chemicals for industries including coal, it shouldn't be a surprise that there are numerous chemicals in terms of number and type involved in the spill from leaking containment at Freedom Industries' facility. The chemicals that we've looked up to date are all on the TSCA Inventory and none are CBI.

Information that we've compiled to date for the front office and OGC is summarized below. I know others have been compiling information as well, but please be advised that I've only been in the loop on a few other emails, so I don't know what information you may already have. Don't hesitate to let us know if you have any questions or need anything else.

Primary chemical

MCHM (CASRN 34885-03-5, "4-methylcyclohexanemethanol")

- Surfactant/frothing/foaming agent
- Put on original TSCA Inventory
- 1 public CDR report from Eastman Chemical (PV is CBI)

Nature of the process in which the chemical is used

Not particularly sophisticated chemistry.

Reaction processes used to make an MCHM frothing agent (34885-03-5, "Cyclohexanemethanol, 4-methyl-") are not very clean, so there are likely left over starting materials as well as byproducts in the mix that is the crude end product. Since these chemicals are used in coal processing (coal washing step), which is not particularly sophisticated processing, they product doesn't need to be cleaned up first (it can be used in the crude form). So there are a number of chemicals in the crude product being produced so there will be a number of chemicals in the spill. Furthermore, in addition to the cyclohexane-alcohol-type frothing agents (like MCHM), there are other types of frothing agents used for coal processing (like aromatic glycol ethers). I don't know if co-formulations (mixtures of more than one type of frothing agent) are ever produced and used, but companies (especially producers) certainly may have more than one type at their facilities.

Other chemicals involved

-

MCHM-related - The composition in the MSDS for "crude MCHM" is below.

· All of these chemicals are on the TSCA Inventory (non-CBI).

· All were put on the original Inventory except the second listed component [CASRN 98955-27-2, "4-(methoxymethyl)cyclohexanemethanol].

· The second listed component [CASRN 98955-27-2, "4-(methoxymethyl)cyclohexanemethanol] came in as a PMN and has no regulatory flags associated with it. It is likely just a byproduct in crude MCHM, but it is very similar to MCHM and also functions as a frothing agent (which is likely why it came in at one point in a PMN).

2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided, if available.)

Weight %	Component	CAS Registry No.
68 - 89%	4-methylcyclohexanemethanol	34885-03-5
4 - 22%	4-(methoxymethyl)cyclohexanemethanol	98955-27-2
4 - 10%	water	7732-18-5
5%	methyl 4-methylcyclohexanecarboxylate	51181-40-9
1%	dimethyl 1,4-cyclohexanedicarboxylate	94-60-0
1%	methanol	67-56-1
1 - 2%	1,4-cyclohexanedimethanol	105-08-8

"Other" - There was a list of "other" chemicals that we were provided last week to take a look at. See information provided in the attached email thread.

Aromatic glycol ethers – Regarding Propylene glycol phenyl ether (CASRN 770-35-4, "2-Propanol, 1-phenoxy-") and *di*-Propylene glycol phenyl ether [CASRN 51730-94-0, "Propanol, 1(or 2)-(methyl-2-phenoxyethoxy)-"] more recently reported in the press:

· These are also used as frothing agents in coal processing (washing).

· Both are on the TSCA Inventory (non-CBI).

· Propylene glycol phenyl ether (CASRN 770-35-4) was put on the original Inventory. There are 3 public CDR reports with a National PV of 208,306 lb/yr.

· *di*-Propylene glycol phenyl ether (CASRN 51730-94-0) came in as a PMN and has no regulatory flags associated with it. There are no public CDR reports.

· The relationship between propylene glycol phenyl ether (CASRN 770-35-4) and *di*-propylene glycol phenyl ether (CASRN 51730-94-0) is similar to the relationship between MCHM/4-methylcyclohexanemethanol (CASRN 34885-03-5) and 4-(methoxymethyl)cyclohexanemethanol (CASRN 98955-27-2), in terms of use, reporting under TSCA, etc.

· As a "full service producer" of chemicals for industries including coal, Freedom Industries must be producing both the cyclohexane-alcohol-type frothing agents (MCHM) and the aromatic-glycol-ether-type frothing agents if both were found in the spill.

From: Flattery, Priscilla
Sent: Monday, January 27, 2014 5:37 PM
To: Henry, Tala; Williamson, Tracy
Cc: Morris, Jeff
Subject: RE: Sen. Rockefeller Followup Inquiry on WV Chemicals

Which earlier response is PPH

Priscilla Flattery

Chief of Staff, OPPT

202-564-2718

From: Henry, Tala
Sent: Monday, January 27, 2014 5:22 PM
To: Flattery, Priscilla; Williamson, Tracy
Cc: Morris, Jeff
Subject: RE: Sen. Rockefeller Followup Inquiry on WV Chemicals

Yes, on PPH was last week

Tala R. Henry, Ph.D.

Director, Risk Assessment Division

Office of Pollution Prevention and Toxics

U.S. Environmental Protection Agency

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E: henry.tala@epa.gov

From: Flattery, Priscilla
Sent: Monday, January 27, 2014 4:47 PM
To: Henry, Tala; Williamson, Tracy
Cc: Morris, Jeff
Subject: RE: Sen. Rockefeller Followup Inquiry on WV Chemicals

I know but I don't think on this chemical unless it's a different name for it.

Priscilla Flattery

Chief of Staff, OPPT

202-564-2718

From: Henry, Tala
Sent: Monday, January 27, 2014 4:45 PM
To: Flattery, Priscilla; Williamson, Tracy
Cc: Morris, Jeff
Subject: RE: Sen. Rockefeller Followup Inquiry on WV Chemicals

What chemical are we talking about? I see PPH and PPV below; some sort of real identifier such as name and CAS# would be helpful.

Also, what do you mean "pulled"? We have answered questions about several different CAS# over the past two weeks.

Tala R. Henry, Ph.D.

Director, Risk Assessment Division

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T: 202-564-2959

E: henry.tala@epa.gov

From: Flattery, Priscilla
Sent: Monday, January 27, 2014 4:34 PM
To: Henry, Tala; Williamson, Tracy
Cc: Morris, Jeff
Subject: FW: Sen. Rockefeller Followup Inquiry on WV Chemicals

Tracy/Tala – have we pulled info on this chem?

Priscilla Flattery

Chief of Staff, OPPT

202-564-2718

From: Kaiser, Sven-Erik
Sent: Monday, January 27, 2014 4:31 PM
To: Fort, Felecia; Wallace, Ryan; Mojica, Andrea; Flattery, Priscilla; Levine, Carolyn
Subject: Sen. Rockefeller Followup Inquiry on WV Chemicals

Toxics team,

Thanks for your help responding to WV queries. We got a followup question from Sen. Rockefeller's staff about the second chemical – PPV. Please send the response to Carolyn Levine and me as soon as possible. Thanks,
Sven

Sven-Erik Kaiser

U.S. EPA

Office of Congressional and Intergovernmental Relations

1200 Pennsylvania Ave., NW (1305A)

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202-566-2753

From: Levine, Carolyn
Sent: Monday, January 27, 2014 4:27 PM
To: Kaiser, Sven-Erik
Subject: Q from Senator Rockefeller's office re: proprietary information re: WV chemicals

Sven,

As part of the followup to several Q/A we prepared for Senator Rockefeller's office, the staff has asked about the second WV chemical PPH:

1. Does EPA have the ability to gather proprietary information on chemicals, and if so, are we working to secure this information for PPH basic?

2. Is the EPA able to share this information with other federal agencies also working on the issue (such as CDC and NIH)?

Region 3 thought that OCSPP should respond to this. Thanks for your help.

Carolyn Levine

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