Message

From: Jones, Samantha [Jones.Samantha@epa.gov]
Sent: 6/18/2014 6:46:41 PM
To: Strong, Jamie [Strong.Jamie@epa.gov]
CC: Gehlhaus, Martin [Gehlhaus.Martin@epa.gov]
Subject: Re: News Update: Draft IRIS Assessments of Benzo[a]pyrene, Ethylene Oxide Up Next for Peer Review (BNA Report)

I don't think he said that. I think she misquoted him. Although he did note he was reviewing it and was very pleased with the progression over TMBs.

From: Strong, Jamie
Sent: Wednesday, June 18, 2014 2:33:08 PM
To: Jones, Samantha
Cc: Gehlhaus, Martin
Subject: FW: News Update: Draft IRIS Assessments of Benzo[a]pyrene, Ethylene Oxide Up Next for Peer Review (BNA Report)

What????

From: Katz, Taylor
Sent: Wednesday, June 18, 2014 1:55 PM
To: Sutter, Emma; Scott, Cheryl; Schappelle, Seema; Fritz, Jason; Haque, Mefruz; Zwayer, Bette; Yang, Hui-Min; Wright, Michael; Wright, Barbara; Woodall, George; White, Paul; Wang, Nina; Walsh, Debra; Walker, Teneille; Vulimiri, Suryanarayana; Vinikoor-Imler, Lisa; Vandenberg, John; Troyer, Michael; Suter, Glenn; Strong, Jamie; Spassova, Maria; Sonawane, Bob; Slimak, Michael; Shaw, Denice; Shams, Dahnish; Segal, Deborah; Schlosser, Paul; Sasso, Alan; Sanchez, Yolanda; Samuels, Crystal; Sams, Reeder; Salazar, Matt; Rutigliano, Marian; Ross, Mary; Powers, Christina; Petersen, Dan; Persad, Amanda; Perovich, Gina; Owens, Beth; Olden, Kenneth; Newhouse, Kathleen; Nath, Raghu; Murphy, Patricia; Moore, Danielle; McLanahan, Eva; Marcus, Allan; Makris, Susan; Luke, April; Long, Tom; Lin, Yu-Sheng; Lee, Janice; Kraft, Andrew; Kopylev, Leonid; Knecht, Helen; Keshava, Nagalakshmi; Kadry, Abdel-Razak; Jones, Samantha; Taylor, DebraLynn; Johnson, Maureen; Jinot, Jennifer; Jarabek, Annie; Hotchkiss, Andrew; Hogan, Karen; Hawkins, Belinda; Gwinn, Maureen; Grambsch, Anne; Glenn, Barbara; Gibbons, Catherine; Gehlhaus, Martin; Gatchett, Annette; Gamble, Janet; Galizia, Audrey; Frithsen, Jeff; Frederick, Bob; Flowers, Lynn; Field, Malcolm; Evans, Amanda; Euling, Susan; Deener, Kathleen; D'Amico, Louis; CURTIS, LUCY; Cubbison, Christopher; Corona, Elizabeth; Cogliano, Vincent; Christensen, Krista; Choudhury, Harlal; Chiu, Weihsueh; Carmichael, Brenda; Cai, Christine; Bussard, David; Burgoon, Lyle; Buckley, Barbara; Brinkerhoff, Chris; Boone-Edwards, Amanda; Blessinger, Todd; Birchfield, Norman; Berner, Ted; Bateson, Thomas; Ball, James; Avery, James; Alexander, Laurie
Subject: News Update: Draft IRIS Assessments of Benzo[a]pyrene, Ethylene Oxide Up Next for Peer Review (BNA Report)

Risk Assessment

Draft IRIS Assessments of Benzo[a]pyrene, Ethylene Oxide Up Next for Peer Review

By Pat Rizzuto

June 17 — Draft Environmental Protection Agency assessments that found benzo[a]pyrene, a combustion byproduct and coal tar constituent, and ethylene oxide, a widely used industrial chemical, to be carcinogenic will be next in line for peer review by the agency's Chemical Assessment Advisory Committee, EPA officials told the committee June 17.

The draft Integrated Risk Information System assessments of benzo[a]pyrene and ethylene oxide, which is used to make ethylene glycol, an ingredient in automotive antifreeze, hydraulic brake fluids, stamp pad inks and other consumer products, will be the next two analyses the EPA brings to the committee, Gina Perovich,

acting deputy director of the IRIS program, told the committee June 17 and in a slide presentation that is available online.

First Peer Review; Dual Goals

The chemical assessment committee is meeting through June 19 to conduct its first peer review, which involves trimethylbenzenes (116 DEN A-4, 6/17/14).

The agency established the committee, a permanent part of the EPA's Science Advisory Board, to have a consistent group of experts oversee two separate but related issues: the quality of chemical-specific IRIS assessments and the agency's broader efforts to improve those assessments by better explaining how it reaches its conclusions.

Phasing-In Changes

The agency is adding improvements to its IRIS assessments as those documents continue to make their way towards completion.

That means some of the draft analyses the chemical assessment committee will initially review will contain fewer improvements, but assessments that come later will begin to reflect a wide range of strategies the agency is using to make the documents easier to read and use and to make the agency's reasoning for conclusions more transparent, Perovich said.

IRIS assessments examine the human health hazards of chemicals and the route (ingestion or inhalation) and dose that may cause those hazards to manifest.

The agency's water, air and other regulatory and regional offices, other federal agencies and state governments combine that information with exposure and other data to determine whether the risks from a particular exposure scenario warrant some kind of regulation or other control.

The National Academies issued a report in May praising the agency for its efforts to date to improve IRIS (88 DEN A-16, 5/7/14).

Draft Assessments Released in 2013

The EPA in 2013 released a draft toxicological review of the carcinogenic potential of inhaled ethylene oxide (Chemical Abstracts Service No. 75-21-8) that found the chemical can cause leukemia, breast cancer, and other human cancers (143 DEN A-18, 7/25/13).

BASF Corp., the Dow Chemical Co. and Eastman Chemical Co. were among the manufacturers that operated 11 facilities that reported manufacturing or importing into the U.S. 5.8 billion pounds of ethylene oxide in 2011. That is the most recent year for which the EPA has production volume data.

The EPA also released in 2013 a draft toxicological review of benzo[a]pyrene (CAS No. 50-32-8) that found the ubiquitous combustion byproduct and coal tar constituent is carcinogenic to humans and harmful to developing organs and systems (163 DEN A-14, 8/22/13).

There is no known commercial use for benzo[a]pyrene, which is part of a family of air pollutants produced unintentionally by combustion, the EPA said in that draft assessment. Benzo[a]pyrene is released into the environment from forest fires, motor vehicle exhaust, furnaces burning coal and other combustion sources, the agency said.

Revised Benzo[a]pyrene Draft Soon

A revised, draft benzo[a]pyrene assessment that incorporates EPA responses to public comments will be issued in a couple of weeks, Vincent Cogliano, the interim IRIS program director, told the committee.

The revised assessment will include reference values requested by state agencies, EPA offices and other interested parties, Perovich said. These reference values will address doses that may cause varying problems in different organs and systems, she said.

Reference values are oral ingestion rates and inhalation concentrations—respectively called reference doses (RfDs) and reference concentrations (RfCs)—that the agency concludes people could experience every day over their lifetimes without expectation of harm.

Traditionally, IRIS documents have set only one RfD and one RfC to indicate the lowest dose at which human health might be harmed. The idea was to protect public health, because if people ingested or inhaled less than the RfD or RfC no other health problems would occur.

For years, however, regulators and other risk managers have sought more detailed reference values to address situations where a particular exposure scenario meant they needed to focus on a possible health problem that might occur at exposures above the smallest, most protective dose.

A draft ethylene oxide assessment will follow, Perovich said.

This document will have fewer of the IRIS improvements, because it was further along in development when the agency launched those improvements in 2013, she said.

It will, however, incorporate changes the agency made when a previous version was released for public comment and peer review in 2007, Perovich said.

Six Chemicals

The next batch of draft assessments she said the chemical assessment advisory committee will peer review consists of:

• ethyl tert-butyl ether (ETBE), an oxygenate gasoline additive;

• t-butanol, a high production volume chemical used in the coatings industry for nitrocellulose lacquers and latex production;

• n-butanol, a solvent in products such as paints, surface coatings and waxes, and an oxygenate in fuels;

• royal demolition explosive or RDX;

• diethyl phthalate (DEP), a chemical added to plastics to make them flexible and found in products such as toothbrushes, automobile parts, tools and food packaging and

• hexabromocyclododecane (HBCD), a flame retardant.

Next Week; Coming Later

Hexavalent chromium and inorganic arsenic, which will be discussed in a public meeting June 25-26, will later come before the committee, Perovich said.

Earlier this month, the EPA released preliminary information that will be discussed at the meeting (111 DEN A-17, 6/10/14).

The final batch of draft IRIS assessments the agency plans to bring before the committee will have the widest scope of IRIS improvements, Perovich said.

The final batch of draft assessments will address ethylene benzene, napthalene and several phthalates, she said.

Taylor Katz
Science Communications Intern
National Center for Environmental Assessment
(ph) 703.347.0445
katz.taylor@epa.gov