

ABTSWH Response to recommendation #3

The Advisory Board had recommended that DEEOICP incorporate the disease exposure links identified by the sources listed in table 3-1 of the Institute of Medicine report. DEEOICP requested that the board narrowed the list to the sources the board believes are most relevant, with recommendations as how they could be used in the SEM. DEEOICP reported they found the list of 11 sources to be redundant or contradictory

The Board continues to believe that all these 11 sources would be useful, but to make the task feasible for DEEOICP we have developed a more limited set of databases that can be incorporated. Those recommendations are attached here. The additional sources in the table from IOM can be reviewed and added at a future time.

The ABTSWH recommends that EEOICP use IARC as the source for information on causal links for carcinogens, use IRIS (EPA) to develop causal links between exposures in the DOE complex and non-cancer endpoints, and use NTP as an additional source for both cancer and non-cancer endpoints. Although the other databases listed in the Institute of Medicine report may contain additional causal links, these three data sources are likely to be the ones that are most comprehensive and best supported as causing human health effects. Once the addition of hazardous agents identified by IARC, IRIS and NTP to the SEM is complete, the ABTSWH can reevaluate the necessity for review of additional databases.

IARC is an agency within the World Health Organization whose mission is to continuously assess available evidence and identify which chemicals are known and probable human carcinogens.

IRIS is a database maintained by EPA which identifies chemicals that are determined to have potential human health effects. Attached is a short description of the process by which EPA develops these risk assessments. On the IRIS website, a detailed summary is available for each chemical; this includes a discussion of the underlying scientific basis for the health assessment. The Board recommends that EEOICP rely upon IRIS because of the extensive research and multilayers of review that go into each document. Because EPA has determined that every agent listed by IRIS has potential human health effects the board recommends that all these agents should be linked in SEM to those health effects.

The National Toxicology Program is an interagency program established in 1978 to coordinate toxicology research and testing across the Department of Health and Human Services. The program was also created to strengthen the science base in toxicology, develop and validate improved testing methods, and provide information about potentially toxic chemicals to health regulatory and research agencies, scientific and medical communities, and the public.

Recommended process:

- (1) DEEOICP should identify a team that will implement these recommendations and that includes individuals with competence in toxicology.
- (2) The Board recommends that DEEOICP make this a transparent process, with a report to the Board at each semiannual meeting on agents and health effects added to SEM and those under review.
- (3) DEEOICP should review SEM to be sure that all the IARC group 1 (known human carcinogens) are included in SEM, and are links to all the specific cancers known to be caused by that chemical based on the IARC report
- (4) DEEOICP should add the IARC group 2 carcinogens (probable human carcinogens) using the same process as above
- (5) DEEOICP should add agents identified as causing non-cancer end points based on the IRIS database from EPA
 - a. Review the list of agents evaluated in IRIS and identify the ones that result in non-cancer endpoints. (IRIS has a total of 511 chemicals that have been assessed)
 - b. Match this list against SEM
 - c. For those agents in the SEM, add the non-cancer endpoints as causal links. Each IRIS assessment identifies which specific health effects are caused by that agent. To identify all the health effects, it is necessary to read the entire document. The summary may only list the critical health effect (the health effect found at the lowest dose which then determines the Rfd set by EPA) but the full document lists all the potential health effects. If necessary or helpful the reviewers could use the available ATSDR Toxicological Profiles to identify health effects for agents in IRIS.
 - d. As new exposures are added to SEM, repeat this process
- (6) DEEOICP should follow this same process for toxic agents identified by the National Toxicology Program