

Advisory Board on Toxic Substances and Worker Health


June 13, 2024

Ms. Julie A. Su
Acting Secretary of Labor
Department of Labor
200 Constitution Ave.
Washington, DC NW 20210

Honorable Secretary Su:

On behalf of the Department of Labor Advisory Board on Toxic Substances and Worker Health, I submit the attached Advisory Board Recommendations that were adopted unanimously at the Board's meeting on May 8-9, 2023.

We sincerely hope that our advice is useful to the Department. We thank you for the opportunity to serve as Board members and wish the Program continued success in meeting the needs of the United States energy employees. Please let us know if there are questions.

Sincerely,

Steven Markowitz MD, DrPH

Chair
Advisory Board on Toxic Substances
and Worker Health

Providing the Occupational History Questionnaire to the CMC

Advisory Board on Toxic Substances and Worker Health Recommendation

(Adopted by the Advisory Board on Toxic Substances and Worker Health,
May 8-9, 2024)

Recommendation

The ABTSWH seeks reconsideration of its previous recommendation to provide the Occupational History Questionnaire (OHQ) to any physician asked to address causation in a case along with the accompanying IH reports that would address the validity of OHQ information thereby mitigating the concerns noted by the program for providing the OHQ expressed in the March 21, 2024 DOL response memo.

Rationale

The Board previously recommended that the EEOICP provide the OHQ to the CMC and other consulting physicians when claims are referred to these physicians for review. The Department rejected this recommendation, stating in its March 21, 2024 letter to the Board that the OHQ contains “unvalidated information” which, if provided to the CMC, “would invite the physician to rely on unproven or inaccurate exposure data.” The Department requires the CMC to rely solely or largely on the IH report for understanding and judging exposures.

In the customary practice of occupational medicine, physicians rely to a very large degree on the exposure information provided by the worker or patient. This occurs, because the worker or patient is the person who knows firsthand what he or she did decades ago; co-workers’ input is routinely unavailable. Rarely does the physician have an industrial hygiene analysis of the worker’s exposures. The physician judges the patient’s report of work exposures in the context of their own general knowledge and expertise in workplace exposures to determine its plausibility and likely accuracy.

In the case of EEOICP claims, the OHQ is the primary source of the worker’s own report about their prior exposures. Having an IH report is beneficial to the CMC but should be seen in the claims’ evaluation process as a complement to the OHQ, not its product. The physician needs to understand not only the IH interpretation but the primary information about exposures. This conforms to standard decision-making in occupational medicine.

In addition, the “significance” of exposures has different meanings to IHs and MDs. The former (IH) is more focused on the magnitude of exposure in determining significance, while the latter (MD) is more focused on whether the pattern of exposure signifies that a disease is likely to result. Thus, the CMC needs both the primary data contained in the OHQ and the distillation from the IH to produce an accurate assessment of whether the claimant’s illness was caused, aggravated or contributed to by prior exposures incurred during work at a DOE facility.

Treatment of Parkinson's Disorders in the Site Exposure Matrices

Advisory Board on Toxic Substances and Worker Health Recommendation

(Adopted by the Advisory Board on Toxic Substances and Worker Health,
May 8-9, 2024)

Recommendation

The Board requests that DOL ensure that all work processes associated with chemical exposures that have presumptions for Parkinsonism in the Procedure Manual also have associated linkages to Parkinsonism in the SEM.

The Board also requests that DOL add work processes to the SEM and Procedure Manual that are currently found in HazMap that link Parkinsonism to exposures that are already on the current presumption list for Parkinsonism (i.e. manganese, carbon monoxide).

In addition, the Board also recommends that all associated aliases for Parkinsonism be updated in the SEM and Procedure Manual to include "Primary Parkinsonism".

Finally, we recommend that a working group continue a review of the literature to evaluate whether associations between Parkinsonism and solvents, or other chemicals likely to be present at DOE sites, warrant consideration for new exposure presumptions.

Rationale

Aliases

Parkinson's Disease, Paralysis Agitans and Hemiparkinsonism are the three aliases listed in SEM under the Parkinsonism Health Effects link. These aliases are consistent with the most recent literature review and Board's recommendation on Parkinson Disease from June 16, 2020. Primary Parkinsonism (ICD-9 332.0/ICD-10 G20), an alias commonly used in earlier literature on Parkinson Disease and identified by the Board is not listed and warrants updates to SEM with respective updates to the Procedure Manual.

Toxins

One hundred and nine (109) toxic substances/products are linked to Parkinsonism in SEM under the Health Effects link. These substances/products include or have potential to contain manganese, steel, carbon monoxide, carbon disulfide and trichloroethylene exposures and are consistent with the most recent literature review and the Board's Parkinson Disease recommendation. The SEM listing of toxic substances that have potential to cause manganese and carbon monoxide exposures are consistent with HazMap listing of agents linked with Parkinsonism as adverse health effect.

Department of Labor has established Part E causation presumption for Parkinsonism and manganese, steel and carbon monoxide exposures. These three exposures are referenced in the Procedure Manual (ver. 8.0. Nov 17, 2023). There is no presumption of causation established for carbon disulfide and trichloroethylene exposures. Both solvents are considered associated with Parkinsonism and the CE is instructed, per the Procedure Manual, to develop those claims by including additional IH review and obtaining medical opinion on causation.

Work processes associated with Parkinsonism.

There are four work processes with direct linkages to Parkinsonism under the 'Health Effects' listing in SEM. Three of those are processes associated with potential exposures to manganese through machining/heating of manganese alloys, mining of manganese ores, and welding. The fourth process is associated with exposures to carbon monoxide through operating of internal combustion engines without adequate ventilation.

Ten additional work processes listed in the Procedure Manual under the presumption of causation, are not linked directly to Parkinsonism in SEM 'Health Effects' link. These processes may be found under the toxic substance properties. The information is available for fourteen out of one hundred and nine substances linked to Parkinsonism and includes the following work processes:

- manufacturing dry cell batteries (Manganese),
- silk-screen and other printing activities using manganese bearing pigments (Manganese),
- painting activities using manganese-bearing pigments (Manganese),
- photographic processing (Manganese II chloride, Potassium permanganate, Carbon Monoxide),
- chemical laboratory activities (Manganese II chloride, Potassium permanganate, Carbon Monoxide),
- production processes using chemicals containing manganese (Manganese II chloride, Potassium permanganate, Carbon Monoxide)
- pouring chemical powders (Manganese II chloride, Potassium permanganate, Carbon Monoxide
- sewer and wastewater treatment (Manganese II chloride, Potassium permanganate, Carbon Monoxide),
- using disinfectants (Manganese II chloride, Potassium permanganate, Carbon Monoxide)
- sanitizing drinking water pipes and delivery systems (Manganese II chloride, Potassium permanganate, Carbon Monoxide)

SEM does not link or include work processes identified in other data sources (HazMap) as having disease linkages to Parkinsonism. These processes include:

- metal extraction and refining (HazMap – Manganese/Carbon Monoxide – Adverse Effect: Parkinsonism),

- metal preparation and pouring (HazMap – Manganese/Carbon Monoxide – Adverse Effect: Parkinsonism),
- aluminum producing (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- burning celluloid (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- burning natural polymers (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- burning synthetic polymers (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- cement producing (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- firefighting (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- forging (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- gas welding and cutting (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- glass manufacturing (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- heat treating (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- molding and core making (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- shakeout, cleaning and finishing (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- smelting copper or lead (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism),
- steel producing (HazMap - Carbon monoxide – Adverse Effect: Parkinsonism)

SEM does not provide direct disease linkages between Parkinsonism and work processes resulting in trichloroethylene and carbon disulfide exposures. These work processes are linked to Parkinsonism under the properties of toxic substance for both solvents. Since exposure to solvents is not part of the presumptive standard, determination of work processes at risk for those exposures is by default left to the discretion of the IH. Our ABTSWH review of the current literature finds evidence of new publications since 2020 linking Parkinsonism to either trichloroethylene (n=15) or carbon disulfide (n=1). This is the basis of our recommendation that a working group continue efforts to determine if new presumptions are warranted.

SEM's Status of Public Input website is not updated with regards to Parkinsonism Related Information. The public input on exposures to carbon disulfide, trichloroethylene and manganese products (Maneb), currently linked to Parkinsonism in SEM, is not verified.

Improved Transparency and Communication on the Site Exposures Matrices (SEM)

Advisory Board on Toxic Substances and Worker Health Recommendation

(Adopted by the Advisory Board on Toxic Substances and Worker Health,
May 8-9, 2024)

Recommendations

1. The ABTSWH recommends that the Department of Labor (DOL) inform and submit to the Board (after classification review), in writing, a list of any and all changes to the SEM, prior to and with each change in the public SEM [i.e. the internet accessible SEM (IAS)].
2. The Board recommends that DOL direct their contractor (currently Paragon Technical Services, Inc.) to prospectively and retrospectively provide notation of any changes to toxic substances, labor categories, facilities and work processes that are/were altered in the SEM, with documentation of the rationale for the change in the SEM.
3. The Board recommends that DOL continue the in-person meetings with PTS, or the current contractor for the SEM, with members of the board's SEM subcommittee on a routine basis and in person (up to three times a year) to discuss ongoing improvements of the SEM.

Rationale

The charter for the Advisory Board on Toxic Substances and Worker Health (ABTSWH) states that one of the duties of the Board is to advise the Secretary with respect to the Site Exposure Matrices (SEM) of the Department of Labor (DOL). The Board recognizes that the Energy Employees Occupational Illness Compensation Program (EEOICP) has oversight and relies on their contractor for the Site Exposure Matrice (SEM) System. Nonetheless, to ensure value and confidence in the SEM it is the Board's view that a record of changes made to the SEM be made and reviewed to ensure an appropriate justification of changes, prevent misunderstanding, and enable corrections when needed. In particular, deletion of labor categories and chemicals from SEM without a publicly accessible explanation or documentation to support the deletion and or changes of the categories is detrimental to public trust. Elevated transparency is especially important when decisions are made by a third-party contractor, regardless of the inherent value afforded by the contractor's services. By ensuring reports of changes to the SEM being released to the Board, this would enable a public record of these changes and allow the Board to better fulfill one of its stated purposes.

Given the critical value the SEM provides to the claims process, a continuation of in-person meetings with the SEM contractor and members of ABTSWH will enable transparency of process in ensuring the long-term viability and continued improvements of the SEM database. The March 2024 meeting between PTS, DOL and members of ABTSWH was of high value to the Board, and allowed resolution of several long-standing concerns the board had regarding the SEM. Further, this meeting enabled the identification of under-appreciated and emerging challenges facing the SEM. A routine face-to-face interaction will hasten resolution of issues that may arise, or that are identified in the change reports requested under the first recommendation.

Enhanced Interaction between Board and EEOICP Industrial Hygienists

Advisory Board on Toxic Substances and Worker Health Recommendation

(Adopted by the Advisory Board on Toxic Substances and Worker Health,
May 8-9, 2024)

Recommendation

Directly related to the April 5, 2024 DOL response to the ABTSWH, we recommend that the Program facilitate a conversation between a subset of the next Board and DEEOIC Industrial Hygienists (IH) to gain insight into IH processes. Prior to this conversation, a subset of the Board would develop and submit to DOL a framework for this conversation, to include planning and conducting a subsequent meeting that includes at least two contract IHS.

Rationale

This recommendation follows that made by the Board in November 2023. The Department requests the development of a framework for the requested interaction. The anticipated framework includes inquiry into how IHS use available data and their own experience to apply the EEOICP Procedure Manual-required exposure designations, especially when there are a lack of objective exposure data and complexities of estimating exposure for employees with diverse work histories. The Board would also seek clarification on the selection of toxic substances for IH review and the ability of the IH to expand or narrow the scope of their review. We also seek clarification on how information from the Occupational History Questionnaire and claimant exposure related testimonials are evaluated and communicated to physicians, CMCs and CE. Finally, the basis for how the factors noted in the April 5, 2024 DOL response to the ABTSWH are used to reach a conclusion of incidental versus significant exposure and the extent if any known toxicological properties related to dose-effects factor into this decision, especially related to consideration of all potential routes of exposure (inhalation, ingesting, external) especially in cases where specific data is limited or unavailable, such as objective industrial hygiene or occupational safety and health monitoring data, protective measures (PPE), occupational safety protocols, or other health hazard avoidance measures, employee training, or evidence of unique or unusual circumstances of exposure.