

**ABTSWH Follow-up Questions**  
**PTS Report on Asbestos Exposure Presumption**  
**May 24, 2022**

As requested by DOL, Paragon Technical Services (PTS) re-examined recommendation concerning the ABTSWH Asbestos Recommendation follow-up relating to:

- If SEM routinely recognizes bystander exposures, raising the question about whether the SEM can be expected to reliably link asbestos exposure to occupations whose only exposure was bystander in nature.
- The Board's question if bystander asbestos exposure may well apply to chemical and mechanical engineers and health and safety engineers, stating that "it seems quite likely that documentation provided by the DOE and, thus, the SEM, would not address bystander exposures." As a result, the Board recommended that PTS re-examine the issue of presumptive asbestos exposure for Chemical Engineers, Industrial, Health, & Safety Engineers, and Mechanical Engineers.

Each is addressed below.

Bystander Asbestos Exposures

As we initially commented on the ABTSWH comments about the PTS recommendation, SEM does recognize bystander exposure when documentation such as industrial hygiene sampling demonstrates that potential asbestos exposure exists. Additionally, SEM does not rely solely on labor categories to decide to include or exclude asbestos in the profile. When asbestos is identified in work processes or buildings, SEM would display asbestos as a potential exposure regardless of labor category for any search that includes that work process or building. Therefore, anyone involved at such a location or work process would be associated with asbestos exposure.

Chemical Engineers, Industrial, Health, & Safety Engineers, and Mechanical Engineers

We re-examined our conclusions regarding these three occupation groups from the National Occupational Mortality System (NOMS) analysis that were identified as demonstrating exposure to asbestos. The ABTSWH appears to indicate in their follow-up concern that our analysis of the information may have been based on the PTS team believe that SEM demonstrated that these occupations did not have asbestos in the SEM profile. However, there is an overarching rationale associated with these three occupations as they pertain to application of presumptive asbestos exposure. A major basis for the Paragon conclusion related to these three occupations rest in the difference between "occupations" as used and applied in the NOMS analysis and the "labor categories" as used and applied in SEM.

The labor categories shown in SEM are site specific and linked to the labor title terminology used at each site. Each DOE site that has been profiled has a unique SEM profile, and each profile includes the labor category titles used at the applicable site, as defined in site procedures, union contracts, and site personnel records. This design facilitates and simplifies SEM use by both DOL and the public. In contrast, the NOMS uses broad "Occupations" that include work activities across multiple industries and labor categories. This difference is at the heart of the PTS conclusion that Chemical Engineers, Industrial and Health and Safety Engineers, and Mechanical Engineers as identified in the NOMS analysis is not equivalent to these labor categories as used in SEM. The PTS evaluation was focused on determining whether the occupations identified by the ABTSWH analysis had corresponding labor categories at DOE facilities; whether the sample from the NOMS search was from industries that reasonably reflected the nature, frequency, and duration of asbestos exposure at DOE facilities; and whether there was any evidence of asbestos exposure associated with these labor categories that was validated during the extensive research for SEM.

For these three occupation groups, PTS concluded and reaffirms our determination that these occupation groupings used in the NOMS analysis do not reflect work conducted by the matching labor category as used in SEM. SEM labor categories reflect the functional aspects of work performed at DOE facilities regardless of engineering discipline. As indicated in the PTS report, the Equivalent SOC/BLS Occupation Code for Chemical Engineer, is defined as, "Design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering." Within DOE, most chemical engineers are involved in the design of small-scale processes and maintaining/improving existing process equipment. Design of large production-scale facilities, like those constructed at sites like the gaseous diffusion plants and reactors, was completed by engineers employed by architecture and engineering firms or major construction contractors. Chemical Engineers at DOE facilities performing duties in production or other line functions would not be associated with their functional labor category and not as a chemical engineer. The same analysis applies to Industrial and Health and Safety Engineers and Mechanical Engineers.

### Conclusion

PTS has re-examined our original evaluation of the three occupations of concern in the ABTSWH follow-up questions concerning the asbestos presumption of occupation groupings identified by the NOMS analysis of asbestos exposure. We believe that SEM would identify bystander asbestos exposure validated at specific work processes and locations at DOE sites. We also reaffirm our conclusion that the NOMS Occupation Groupings for Chemical Engineers, Industrial and Health and Safety Engineers, and Mechanical Engineers do not match similar labor categories at DOE facilities potential asbestos exposures. Therefore, the NOMS analysis is not sufficient to add these three labor categories to the asbestos exposure presumption list. Normal evaluation of the projects and functions can better evaluate the potential asbestos exposure.

