



SEC-00236 Metals and Controls Corporation NIOSH Update on Petitioner Concerns

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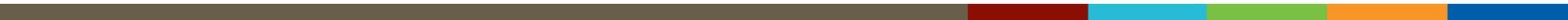
January 9, 2020

Summary of Petitioner Concerns Issues

- Summary of current responses to SC&A Review of the NIOSH Response Paper: “Metals and Controls Corp. SEC-00236 Petitioner Concerns”

0 Findings

0 Observations



Petitioner Concern 1

- NIOSH has failed to satisfy these fundamental regulatory requirements:
 - Source term characterization is incomplete;
 - Incomplete knowledge of the nature, frequency, and duration of jobs performed in intimate contact with the source term;
 - A complete absence of any measurements or monitoring of the workers who are covered by this petition;
 - And no comparable population with measurements or monitoring data that can be relied on as a surrogate for the class in question

Petitioner Concern 1 *(Continued)*

- SC&A Review
 - SC&A found that NIOSH presented data that can form the basis of estimating doses to M&C workers during the residual period. SC&A disagrees with some the parameters and assumptions which NIOSH used to implement its approach but these would be site profile (technical basis document) issues.
- Action Needed
 - None

Petitioner Concern 2

- The petitioner noted that the 1996 drain characterization survey in the interiors of Bldg. 10 and Bldg. 4 only analyzed the sediment and soil samples for isotopic uranium. Therefore, we can never know for sure what the thorium concentrations might have been.
- SC&A Review
 - NIOSH has enough information to estimate worker exposures to residual thorium-232 contamination.
- Action Needed
 - None

Petitioner Concern 3

- By the time the drain survey was conducted in 1995, there had been close to 30 years of disturbances of the drain lines during the residual period, they were snaked numerous times, and some of the most plugged sections had been removed entirely. Therefore, there is no guarantee that the levels documented in the drain survey represent the maximum levels ever present, and to which the M&C maintenance workers would have been exposed.
- SC&A Review
 - NIOSH addressed this concern by adopting the 95th percentile value of the pipe contamination data, rather than the geometric mean, as the basis of exposures of M&C maintenance workers. SC&A concurred with this strategy.

Petitioner Concern 3 *(Continued)*

- Action Needed
 - None

Petitioner Concern 4

- The gross alpha screening analysis methodology that was used for the 1994-1995 comprehensive characterization surveys, for the majority of subsurface soils other than the drain survey area, was biased low at concentrations above the 30 pCi/gram cleanup standard.
- SC&A Review
 - SC&A's review of the 1994–1995 survey methodology and results did not find any evidence of bias that would affect the conservativeness of our exposure model.
- Action Needed
 - None

Petitioner Concern 5

- The petitioner cited remarks made by the Chair of the M&C work group, at the 126th Meeting of the Advisory Board on December 13, 2018, referring to contaminated soil and other debris removed (by railcars) during the 1992-1996 decommissioning activities from a site that had been released for unrestricted use. The petitioner stated that this residual contamination exposed M&C maintenance workers to unknown and unknowable levels of exposure.
- SC&A Review
 - The NIOSH response concerning the contamination surveys that were performed prior to the removal of the soil and other debris, the changing release criteria, and the use of more comprehensive investigative methods, fully responds to the petitioner's concerns.

Petitioner Concern 5 (*continued*)

- Action Needed
 - None

Petitioner Concern 6

- Concerning the incomplete knowledge of the nature, frequency, and duration of jobs performed; the degree of confidence that the NIOSH and SC&A technical experts place in the one-month duration estimate for all intrusive activities, both subsurface and in overhead areas, seems overly confident.
- SC&A Review
 - SC&A believes that NIOSH can arrive at a bounding, plausible estimate.
- Action Needed
 - None

Petitioner Concern 7

- There is a complete absence of any measurements or monitoring of the workers who are the subject of the petition. NIOSH has relied on measurement and monitoring data for several surrogate populations that are not comparable to the typical M&C maintenance worker in the class covered by the petition. The surrogate classes proposed by NIOSH do not adequately characterize the maximum radiation dose to any member of the class covered by the petition.

Petitioner Concern 7 (*continued*)

- SC&A Response
 - SC&A concludes that NIOSH is able to construct plausible, bounding scenarios to assess the exposures of M&C workers during the residual period.
- Action Needed
 - None

Petitioner Concern 8

- NIOSH has failed to take a broader, and more accurate, view of the typical M&C maintenance worker. The measurement and monitoring data from the 1960s, 1980s and the 1990s for radiation workers and D&D workers, on which NIOSH has relied for their dose reconstruction modeling, are not suitable to estimate the bounding dose for the class of M&C maintenance workers.
- SC&A Review
 - SC&A found that NIOSH presented data and methods that constitute a sound basis for assessing worker exposures, including those of workers engaged in maintenance and remediation during the residual period.

Petitioner Concern 8 *(Continued)*

- Action Needed
 - None

Petitioner Concern 9

- An M&C Health Physicist expressed concerns that NIOSH was using measurement and monitoring data collected for D&D workers during the 1990s decommissioning project as a surrogate for the types of exposures received by M&C Maintenance Workers during the residual period for estimating a bounding dose. The M&C Health Physicist also claimed that members of the Advisory Board stated that it is virtually impossible to identify every conceivable exposure scenario that the M&C maintenance workers were exposed to.

Petitioner Concern 9 *(continued)*

- SC&A Review
 - presented data and methods that constitute a sound basis for assessing worker exposures, including those of workers engaged in maintenance and remediation during the residual period at M&C.
 - NIOSH will augment the dose reconstructions with any additional information based on the workers' experience and recollections that is furnished by claimants.
- Action Needed
 - None