

General Steel Industries (GSI) Special Exposure Cohort

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GSI Uranium Airborne

- **Performed radiography examinations of uranium metal using betatrons**
- **No correction of defects or other manipulation of uranium metal was reported**
- **Potential airborne from uranium corrosion products**
- **Used surrogate data to define airborne**

GSI Airborne Estimate

- **Originally estimated using surrogate data from TBD-6000**
- **This data was not considered representative of GSI**
- **Work Group suggested NIOSH search for more appropriate data, the Board agreed**
- **Data was to be representative of handling cold uranium metal**

Additional Data

- Search resulted in adding data to the sparse data previously collected
- Data set contained 37 air samples
- Form of uranium consisted of
 - Slugs
 - Derbies
 - Billets
 - Dingots
- Analysis of the data indicated airborne values were independent of size and shape

Sanford Cohen & Associates (SC&A) Review

- SC&A reviewed the data and suggested several additions, deletions and adjustments
- NIOSH, SC&A and the Work Group agreed with a final data set including most but not all of SC&A suggestions

	NIOSH	SC&A	Final
Geometric mean	21.3 (dpm/m ³)	12.7 (dpm/m ³)	17.5 (dpm/m ³)
Geometric Standard Deviation	2.62	2.74	2.29
95 th Percentile	103.7 (dpm/m ³)	66.4 (dpm/m ³)	68.7 (dpm/m ³)

Surrogate Data Criteria

- **NIOSH evaluated the data set against the Boards Surrogate Data criteria and determined the criteria was met**
- **SC&A reviewed the data against the criteria and agreed**
- **During the Work Group meeting on 11/28/2012, the Work Group agreed**