



Response to SC&A comments on Savannah River Site Plutonium Construction Trade Worker Stratification Refinement

Timothy D. Taulbee, PhD, CHP

Associate Director for Science

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NIOSH Response to SC&A Finding 1

- 95th percentile is not exclusively used in Dose Reconstruction. It is a bounding scenario and method.
- The decision as to what should be assigned is made during the dose reconstruction process based on the total of information in the claim
 - Environmental Dose (minimal exposure)
 - Geometric mean or 50th percentile
 - 95th percentile

NIOSH Response to SC&A Finding 1 (cont.)

- Comparison of TWOPOS and Intakes
 - TWOPOS Results:
 - Prime 50th % is higher in 4 of 5 years
 - Prime 95th % is higher in 3 of 5 years
 - Intake Models
 - Prime CTW 50th % is higher in 2 of 2 intake periods
 - Prime CTW 95th % is higher in 1 of 2 intake periods
- No apparent difference to support stratification

NIOSH Response to SC&A Finding 2

- Two operating divisions (Operations and Construction)
 - Both had Construction Trades Workers (CTWs)
- Five-digit payroll ID is basis for subcontractors
 - Miller-Dunn: Electricians
 - BF Shaw: Pipefitters
 - North Brothers: Insulators
 - etc...

NIOSH Response to SC&A Finding 2 (cont.)

- Some CTWs hired by DuPont Construction out of the union hall might appear to be “prime” CTWs but these are generally temporary workers like the subcontractor CTW
- Regardless, DuPont assigned these workers a 5-digit payroll ID and added them to the DuPont Construction Division Roll
- Again we identified (stratified) subcontractors CTWs based on the 5-digit payroll ID, which typically has an additional craft code associated with it.

NIOSH Response to SC&A Finding 3

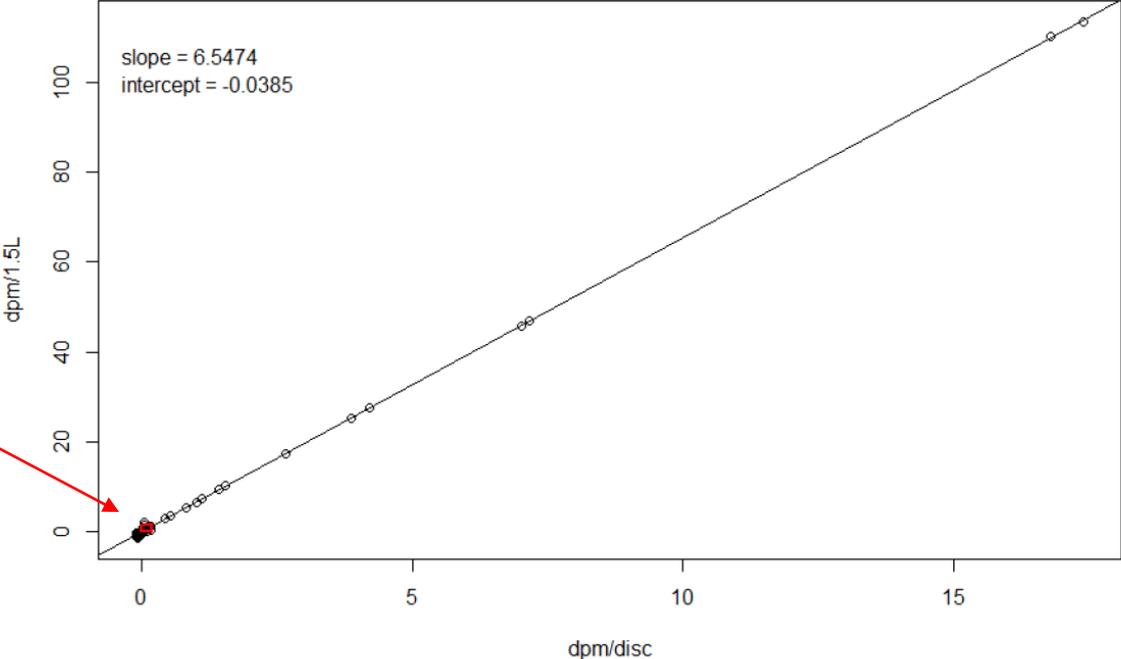
- Goal was to investigate whether there was any evidence that we should further stratify the population
 - Not intended to be a full co-exposure analysis
- Full quality assurance tests were not performed for this analysis nor do we feel this is warranted as the information developed is solely to evaluate whether further stratification is needed

NIOSH Response to SC&A Finding 4

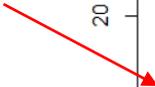
- NIOSH recognizes that the dpm/disc to dpm/1.5L linear regression is not perfect
- Some data deviate due to:
 - Suspect miscalculation in the original data
 - Transcription errors
 - Chelation from known intakes
 - Variable recovery factors
 - Different aliquot sizes

dpm/disc to dpm/1.5L Regression

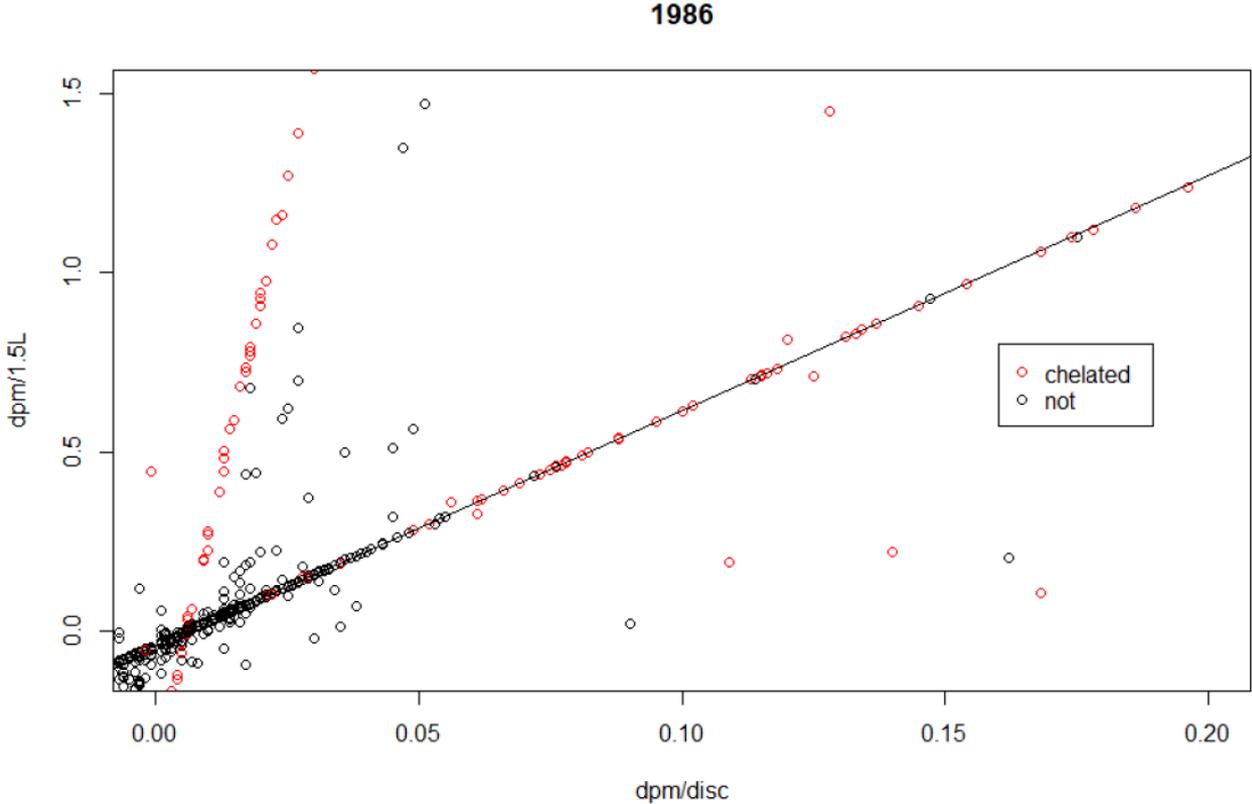
1986



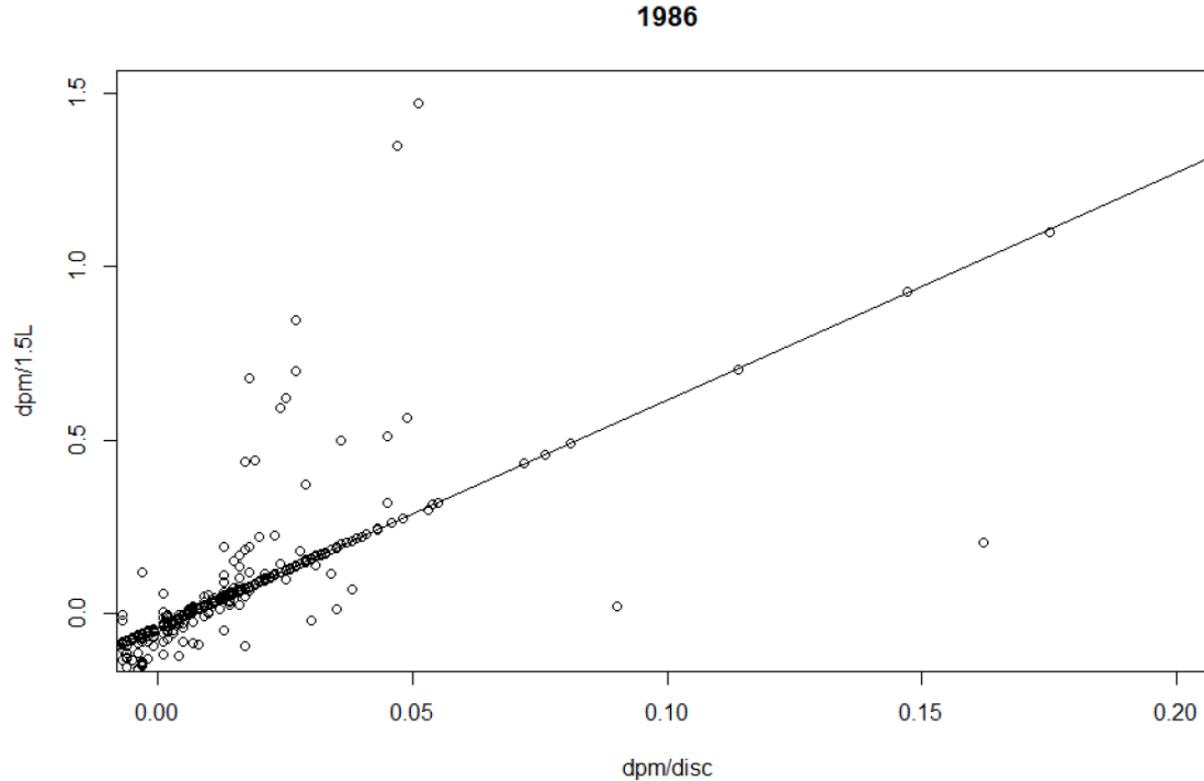
Portion expanded by SC&A



SC&A Expanded view of 1986 regression



1986 Regression plot without chelated data



NIOSH Response to SC&A Finding 4 (cont.)

- Linear regression method enabled NIOSH to greatly reduce the number of censored data for this analysis
- Although not perfect, the vast majority of the data fell on a straight line over a very large range.
- Further corrections to the data on aliquot size could be made but we do not believe that this will significantly change the regression.

NIOSH Response to SC&A Observation 1

- While additional data would provide for a more comprehensive analysis between prime and subcontractor CTWs, the current assessment provides sufficient information to conclude that further stratification is not necessary.
- The 5 non-contiguous years cover the DuPont era during the SEC range currently being evaluated by the ABRWH
- Considering the entire set of analysis, including the TWOPOS and intake results, there is no apparent difference between the prime CTWs and subcontractor CTWs

NIOSH Response to SC&A Observation 2

- In the original dataset, there were 5, 3, 9 uncensored results for subcontractor CTWs in (1974, 1983, 1986)
 - Far less than 30 recommended
- *Use of claimant datasets for coworker modeling (OTAUT-OTIB-0075, SRDB 157060)* provides justification for why the claimant population represents the same exposure potential as the non-claimant population.
 - The inverse is true that the entire population represents the same exposure potential as the claimant population

NIOSH Response to SC&A Observation 3

- There are over 3000 data pairs used in this analysis
- SC&A identified 12 instances where a zero or negative dpm/disc result was reported with a positive dpm/1.5L result.
- 8 of the 12 are attributed to transcription/legibility issues
- Given the nature of the averaging process (TWOPOS results to intakes) the 4 results have an insignificant impact on the overall conclusion