

**Priority Issues for demonstrating feasibility of dose reconstruction for MCW
Destrehan Street workers for the time period of 1949 to 1957: List of Tasks
Developed by the ABRWH
July 6, 2005**

The following is a list of tasks to be completed by NIOSH and delivered to the ABRWH workgroup and SCA, Inc. for resolution. To allow for an adequate amount of time for SC&A/NIOSH/Board to complete comment resolution by August 23 the following schedule is set forth:

- Workgroup conference call for status report and task clarification by July 26
- NIOSH will provide a draft report on the following tasks in consultation with SCA by July 31
- Work Group meeting between July 31 and August 8
- SCA to review the NIOSH response to the tasks and issue report to Board by August 16 (1 week before Board meeting)
- Work group conference call for comment resolution between August 16 and August 22

List of Tasks

1. Handling of Raffinate exposures
 - a. NIOSH should specify the radionuclide ratios (Ra-226, Th-230, Ac-227, Pa-231) for all ore processing (including non-pitchblende ores)
 - b. NIOSH should specify the radionuclide ratios for K-65 uranium extraction (including processing steps and filtration steps)
 - c. NIOSH should specify how ratios will be applied by job title (including roving workers and cases where no job title are available)
 - d. NIOSH should specify approach for estimating intake when any combination of urine, air sampling and breath radon data is available. In this context NIOSH should consider the reliability of breath radon for determining Ra-226 intakes.
2. Handling of Radon exposures
 - a. NIOSH must resolve whether sufficient radon data is available to determine job specific radon exposures
 - b. NIOSH must specify approaches for handling job specific radon values
 - c. NIOSH / SCA must further discuss and if possible resolve organ doses per unit intake of radon
3. Application of correction factors for external doses to organs
 - a. NIOSH must specify the approach to be used to determine organ specific and job specific geometry assumptions to be used in dose reconstructions

4. Assessment of intermittent incident exposures
 - a. NIOSH should determine, for a given set of bioassay data, what the approach to estimating cumulative intake will be when there are significant / infrequent incidents (e.g. dust bag ruptures, overflow of thorium solution) given the guidelines in the site profile Rev. 1 section 6.1, item 1.

5. Specification of dose reconstruction methodology for un-monitored workers
 - a. NIOSH needs to outline scientifically defensible approaches to be used for conducting dose reconstructions for un-monitored workers (e.g. secretarial workers, maintenance mechanics, plant 1 and 2 decommissioning workers, SLAPS workers) including specific assumptions regarding radionuclide mixture

6. Example dose reconstructions for representative cases

Representative cases should include the following:

- a. Example internal dose reconstruction for plant 6 subject involving K-65 residues processing for U extraction (where urine, air and breath radon are available) for selected metabolic and non-metabolic organs.
- b. Example internal dose reconstruction for plant 6 case involving K-65 residues processing for U extraction (where urine, air data are available but no breath radon) for selected metabolic and non-metabolic organs.
- c. Example internal dose intake estimate for plant 7 Thorium extraction worker (1955-1957).