



## MEMO

TO: Mound Work Group  
FROM: Joseph Fitzgerald, SC&A  
DATE: April 19, 2012  
SUBJECT: Technical Conference Call, April 6, 2012: Clarification of Documentation Received by SC&A from NIOSH Regarding Ventilation of Radon in SW/R Buildings

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### PARTICIPANTS:

**NIOSH:** Jim Neton, Brant Ulsh  
**ORAUT:** Karin Jessen, Sam Chu, Mel Chew  
**ABRWH:** Josie Beach, Paul Ziemer  
**SC&A:** Joe Fitzgerald, John Stiver, Joe Porrovecchio, Aris Papadopoulos  
**HHS:** Jenny Lin

**BACKGROUND:** A conference call was requested by SC&A with NIOSH regarding materials provided to the Work Group and SC&A intended to clarify historic HVAC system design features and air flow patterns in R/SW buildings (including a paper by Sam Chu dated February 24, 2012, and various HVAC drawings for R and SW (1948–1984). SC&A had questions intended to clarify these materials in advance of an upcoming Work Group meeting on April 10, 2012.

As an introduction, Joe Fitzgerald provided some background regarding the purpose of the call and Joe Porrovecchio provided additional perspectives on R Building ventilation issues gleaned from an interview conducted the day before with [redacted], a former HVAC maintenance manager at Mound. In the latter, Joe outlined some key points made by Mr. [redacted]:

- The ventilation system operated 24/7, guided by use of differential gauges for each room, with filters changed regularly on the supply air side.
- Exhaust fans had HEPA filters, which were changed out less frequently.
- Air flow was maintained routinely with each room monitored to its design pressure.
- The buildings were maintained at negative pressure to the outside, and each room was maintained at negative pressure (with some exceptions) to the corridors; in general, the movement of air was to the exhaust systems.
- The R Building north-south corridors were numbered: 2, 5, and 3 from west to east, respectively. Corridor 2 was the boundary between the “hot” and “cold” sides of R Building; the area further east of that corridor (east of corridor 5) was “very cold.”
- The room R-128 alpha readings (as reported in the NIOSH October 2011 white paper) appear to have been transient; i.e., an exception to this overall ventilation history.

As observed by Joe, this interview was very helpful in enabling SC&A to understand the practical functioning of the ventilation systems in R and SW, and did clarify most of the specific questions that were the original reason for this technical call (hence, the fewer questions and shorter call).

Q – Whether a documented history exists of the “capping” of duct penetrations between SW and R buildings; is there a time frame for this capping?

A – NIOSH does not have specific documentation on that, but the date of the drawing showing the capping is November 16, 1960. In any case, it is irrelevant, because all the penetrations are in tritium areas of the R building, which are already included in the current SEC.

Q – Is there better building diagrams showing the spatial relationships between the tunnel, the cave, and the various rooms in R and SW buildings?

A – The collection of R/SW building drawings has been reviewed three times in response to evolving requests on this issue from the Mound Work Group/SC&A. NIOSH has captured all drawings to be relevant to this issue, and sees no value in revisiting the drawing collection. All the drawings we captured were scanned and placed in the SRDB. In addition, hardcopies have been provided to SC&A. Multiple drawings show the location of the tunnel and SW-19, as described in NIOSH’s October 2011 report. [Josie Beach requested that a copy of these diagrams be made available for participants to review at the upcoming Work Group meeting; SC&A will bring its copies that NIOSH provided].