

From: Thomas E. Potter [potttert@erols.com]
Sent: Thursday, February 26, 2004 7:43 AM
To: Strom, Daniel J [strom@pnl.gov]
Subject: The "Pig Pen" effect

Dan,

I worked for Roger Caldwell at NUMEC when I was in my twenties and just starting out, and have always considered him a mentor, even though he was only 5-6 years older than I was. A number of years ago, at some HP meeting, you and I met and I promised to send you some Roger Caldwell papers. I both have never quite forgotten that promise, and have never quite gotten around to making good on it. Prompted by your recent RADSAFE request for same, and your most considerate and most useful effort to have Roger's work better disseminated, I was moved to spend the wee hours of last night digging around and assembling a package of seven additional papers to send to you. I will also post a list of those on RADSAFE responding to your request.

My poking around also included a Google search that turned up your "Pig Pen" effect question posted on RADSAFE in 1996 (reproduced below), which I do not recall having seen before and which is the subject of this email. The Google search did not find any follow-up to your question. A search of the Listserv archive might turn up something, but in the interest of time, I thought I would just dash off the bit that I know about the subject.

Roger used that term and other "Pig Pen" terms frequently in talking formally or informally about exposure to aerosols and assessment. That much is not apocryphal. Indeed, one of the Caldwell papers listed in your request, "Bioassay Correlation with Breathing Zone Sampling," included a slide of Pig Pen walking, complete with trailing aerosol cloud. At least the presentation version of the paper included that slide. The Pig Pen slide may not have survived in the published version, which I do not have. For the sake of assuring as complete a record as possible, I will also include a copy of the as-presented form of this paper in the package I send.

Roger also casually inserted the Pig Pen slide in other oral presentations, even though it may not have been included in the handout version. I remember him using it a couple of times as a focus-check slide to start off a presentation. As one in close professional communication with Roger in that era, I can certainly recall his liberal use of Pig Pen as poster boy.

I do not recall any earlier exploitation of Pig Pen along these lines by anyone else. It may be that Roger got the idea from someone else, but it would be unlike him not to credit the originator of what he obviously considered a valuable insight (especially for training purposes). Roger was pretty careful about protecting the lineage of good ideas.

If someone else did originate the idea, I would finger Harry Schulte as a likely suspect. Harry had the interest, the knowledge, the point of view, and the wit, and he and Roger were practically best buddies.

Tom Potter

You posted on RADSAFE:

To: radsafe@romulus.ehs.uiuc.edu

Subject: The "Pig Pen" effect
From: dj_strom@ccmail.pnl.gov
Date: Mon, 23 Sep 1996 10:46 -0700 (PDT)

RADSAFERS,

I'm looking for the earliest reference to the "Pig Pen" effect in radiation protection. This effect, named after the Charles Schultz character in the Peanuts(TM) comic strip who walks around in a cloud of dust and debris, is the phenomenon of air being more contaminated near a worker than at some distance away. The explanation for the Pig Pen effect is simply that the worker is generating the aerosol. It is important because it impacts the degree to which an air sample represents the concentration breathed by a worker.

If you know who first coined or used the term, and a reference for it, I would be most grateful. I have heard it attributed to the late Roger Caldwell, then at NUMEC in Apollo, PA, in the late 1960s, but this is apocryphal.

Please respond to me privately, and I will post a composite answer on RADSAFE.

- Dan

The opinions expressed above are my own, and have not been reviewed or approved by Battelle, the Pacific Northwest National Laboratory, or the U.S. Department of Energy.

Daniel J. Strom, Ph.D., CHP
Staff Scientist
Health Protection Department K3-56
Pacific Northwest National Laboratory
P.O. Box 999
Richland, WA 99352-0999 USA
(509) 375-2626
(509) 375-2019 fax
strom@pnl.gov