

June 15, 2017

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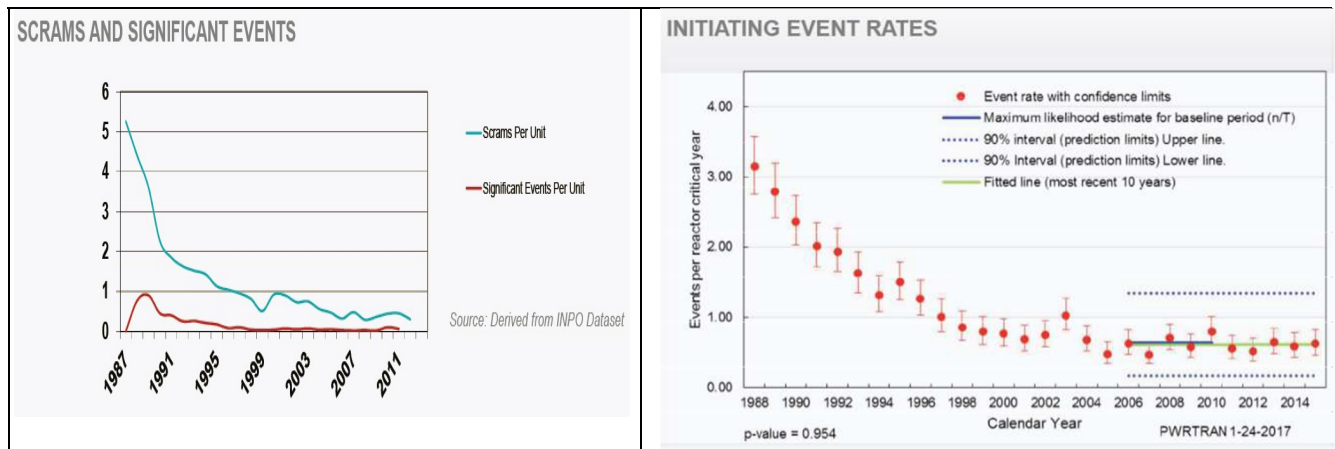
SUBJECT: Reactor Oversight Process Engineering Inspection Programs

Dear Gentlemen:

I regret missing the public meeting the NRC held on June 6, 2017, to discuss potential changes to the engineering inspections conducted under the Reactor Oversight Process (ROP). I consider the ROP to be one of the best things the NRC has ever done. The NRC does a fine job of establishing the agency's expectations regarding safety performance at operating power reactors. Clear articulation of the expectations makes it easier for plant owners to meet them and for NRC's inspectors to identify shortfalls as early as possible, before they grow to epidemic proportions.

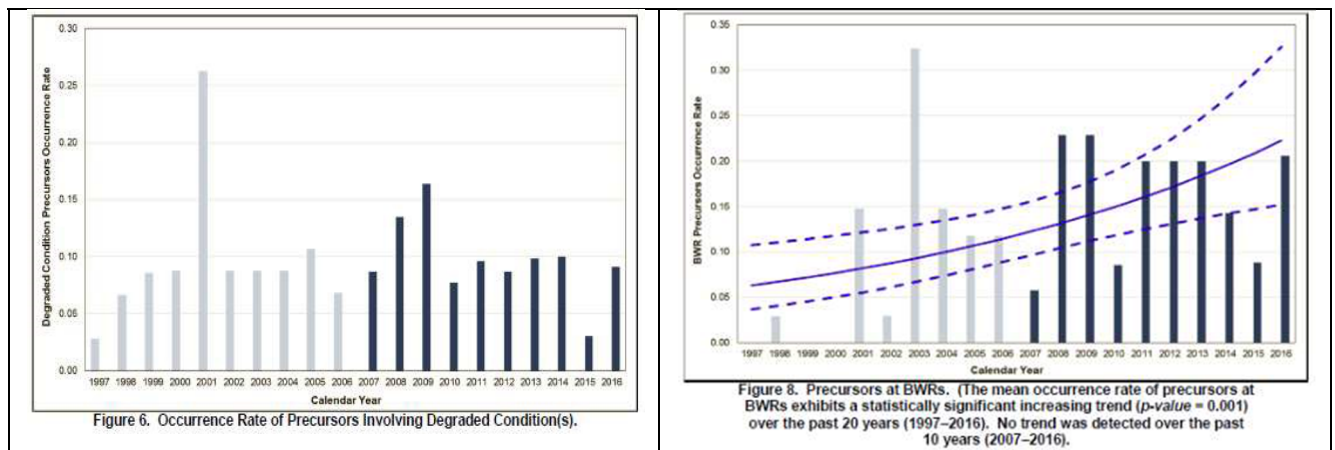
One of the many attributes that makes the ROP valuable is the recognition by the NRC that it is a work in progress. The meeting I missed is one of many mechanisms used by the NRC to consider adjustments to the ROP to make it better and more efficient.

I reviewed the slides used by industry representatives during the June 6 meeting. The slides began with graphics showing improving safety trends, including these two:



Slide 9 of the industry’s slides contained this statement: “Safety record of the industry has continuously improved.”

Two days after the meeting, the NRC issued its annual report on the accident sequence precursor (ASP) program (ML17153A364 and ML17153A365.) The ASP report also contained graphics, including these two:



The graphic on the left is Figure 6 showing the number of precursors involving degraded conditions to be essentially constant over the past two decades.

The graphic on the right is Figure 8 from the ASP report. Its caption might be hard to read, but states “The mean occurrence rate of precursors at BWRs exhibits a statistically significant increasing trend (p-value = 0.001) over the past twenty years” (boldfacing added for emphasis.)

The steady occurrence of precursors involving degraded conditions and the BWR statistically significant increased trend in accident precursors seem to contradict the industry’s assertion that the safety record as continuously improved. And that p-value is virtually impossible to dispute (even if one understood what it means).

The over abundance of data and the computing methods for slicing and dicing it renders a qualitative approach to distinguish between fat and muscle an amusing but otherwise useless activity. The figures I cut and paste from the ASP report are no more, or less, insightful than those conjured up by industry.

Setting the figure fracas aside, there may very well be ways to conduct the ROP's engineering inspections more effectively and efficiently, including even via the self-assessments proposed by the industry during the June 6 meeting. The matter may not lend itself to a qualitative analysis – check that, to a meaningful qualitative analysis – but a quantitative assessment could fairly evaluate the merits of various options. Another aspect of the ROP's value is that it was originally developed and subsequently been revised via open, collaborative processes. The participation in these processes by industry representatives, NRC inspectors, and members of the public allows a broader set of pros and cons for options to be considered, lessening the chances that unintended consequences occur.

I understand that there will be additional public meetings about potential changes to the engineering inspection portions of the ROP. I would appreciate being notified of these meetings as they are scheduled and for remote participation to be arranged whenever possible.

Sincerely,

A handwritten signature in blue ink that reads "David A. Lochbaum". The signature is written in a cursive, flowing style.

David Lochbaum  
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