May 10, 2006

From: Artimus the Just  
To: RAbulletin@omb.eop.gov; FN-OMB-RABulletin

From the NAS website ... "This project is cosponsored by the Environmental Protection Agency (EPA), the Department of Agriculture (USDA), the Department of Defense (DOD), the Department of Energy (DOE), the Department of Health and Human Services (HHS), the Department of Labor (DOL), and the National Aeronautics and Space Administration (NASA)."

Why isn't the Federal agency that has done more to promote, research, and use risk assessment (yes, the Nuclear Regulatory Commission, or NRC) a MAJOR part of this? Seems like something is wrong here...

From the OMB website ... "When large amounts of historic data from humans are available, an actuarial risk assessment may be performed using classical statistical tools." Why? What do they expect decision makers to do with confidence intervals when they are going to turn around and make probabilistic decisions?

Note that the word "Bayes" is not found at all in the OMB proposed risk assessment bulletin, while classical methods are described at least twice. It is obvious that there is a bias toward old analysis methods. For example, the text "One of the best known types of risk assessments addresses low-probability, high-consequence events associated with the failure of physical structures.20 Since these events are exceedingly rare (e.g., bridge failure or a major core meltdown at a nuclear reactor), it may not be feasible to compute risks based on historic data alone." MAY not be feasible? The term probabilistic risk assessment is shown where probabilistic is in quotes, as if it is a term to be used lightly!

I question: "The term 'risk assessment' means a scientific and/or technical document that assembles and synthesizes scientific information to determine whether a potential hazard exists and/or the extent of possible risk to human health, safety, or the environment." Based upon this definition, opening a web browser, going to Wikipedia.com, and search for risk information is a "risk assessment."

"When there is uncertainty in estimates of risk, presentation of single estimates of risk is misleading and provides a false sense of precision." Isn't this ALL of the time?

"This Bulletin uses the terms "central" and "expected" estimate synonymously. A "central estimate" of risk is the ... or any estimate judged to be most representative of the distribution." Sounds pretty wishy-washy. Are you talking about expected values OR not??
"A model is a mathematical representation -- usually a simplified one -- of reality." A model is ALWAYS a simplified version of reality.

"When the model used by assessors is well established, the central or expected estimate may be computed using classical statistics." This makes no sense to me. Classical statistics is generally used when you have empirical data. When you have a model, you determine the model expected estimate via calculations such as integration, Taylor series expansion, or Monte Carlo sampling.

"Statistical uncertainty sometimes referred to as data uncertainty or parameter uncertainty occurs when some data exist on the value of an input, but the value of the input is not known with certainty.' Again, a non-Bayesian statement.

Should this document take advantage of or refer to documents such as the ASME PRA Standard?