Message

From: Buck, Jeremy [jeremy_buck@fws.gov]
Sent: 7/16/2020 5:50:20 PM
To: peterson.Jennifer@deq.state.or.us; poulsen.mike@deq.state.or.us
CC: Sheldrake, Sean [sheldrake.sean@epa.gov]
Subject: EPA DQO, DQA, and Stat guidance

Hi all-

I am continually impressed with EPA's Data Quality Staff, and am re-reading some of these EPA guidance manuals to make comments on Bradford Island. It reminds me again that these guidance documents and processes described within are excellent and clear, explaining the process that we should be doing on hazardous waste sites very effortlessly. I have not worked on a site yet were this process was fully followed, yet have attended EPA trainings and risk meetings (as well as John Kern's geostats classes) to learn how the process should be applied, so I relate to it's importance in decision making. It would be great to see EPA managers promoting their own guidance more often, for I have seen reluctant favoritism for judgmental designs that commonly win over this recommended process. I have spoken with a few EPA managers "after hours" why the DQO process using statistical rigor is not followed very often, or only partially followed, and have heard the response that it is too complicated and time consuming. Yet it is more time consuming and costly to argue over data inappropriately collected (which I sadly have to report I have done during the first 20 years working at FWS). It is clear that folks that prepared these guidance documents and associated tools bent over backward to make them understandable and clear to the layperson, and it also blends well with the risk approach I learned way back in grad school. With the increased adoption of ISM sampling, the process is even easier, more direct, and clear. It would be great to incorporate these guidance documents and approaches more into the DEQ Ecorisk process or reference them as tools for RPs and their consultants to use, with encouragement from project managers. There is a great website that gives the overview and links to these documents and tools at

https://www.epa.gov/quality/resources-planning-new-data-collections

and the best documents are the EPA Quality System series:

EPA QA/G-4 Guidance on Systematic Planning using the Data Quality Objectives Process 2006
EPA QA/G-5S *Guidance on Choosing a Sampling Design for Environmental Data Collection 2002*
EPA QA/G-9S Data Quality Assessment: Statistical Methods for Practitioners 2006
EPA QA/G-9R Data Quality Assessment: A Reviewer's Guide 2006
EPA QA/G-4D DEFT Software for the Data Quality Objectives Process

It is a bit frustrating that there are a few EPA documents that describe the DQO process differently, but I think this one does it best: *EPA QA/G-4HW Data quality objectives process for hazardous waste site investigations. 2000.* Not sure if *EPA QA/G-4 Guidance on Systematic Planning using the Data Quality Objectives Process* is supposed to replace the QA/G-4HW document or not, but both are very good and similar.

You probably already know all this nerdy stuff but I find it helpful to occasionally review these documents and tools and keep finding great information. Sure wish I know about these resources 20 years ago.

I use the Visual Sampling Plan software a bunch for study design and to suggest alternative sampling plans on projects, and it has been very useful for influencing sampling design especially for ISM. I have not tried using the DEFT software. It could be interesting and useful to really nail down error rates and identify number of samples needed (and then to show how easy and cost-effecting ISM usually is in comparison for sediment and soil).

-JB