From: Hanson, Brady D [brady.hanson@pnnl.gov]
Sent: Friday, July 06, 2012 7:07 PM
To: Oberson, Greg
Cc: Unwin, Stephen; Hanson, Brady D
Subject: RE: vacuum drying

8/8/18

Greg,

Thank you for the vote of confidence. Between me and Ron Omberg, who was the project lead for the drying of the N-reactor fuel here at Hanford, I think we would be able to support you.

As you know, I was the lead on the DOE Gap Analysis report and we identified drying as a high priority need because of lack of data. It is also one of the top priority gaps in our prioritization report.

As I have worked with DOE to plan the DOE-NE program for next fiscal year, we concluded that instead of having any of the national labs doing work, we recommended that DOE fund industry directly to perform tests using facilities such as what AREVA has in Aiken or Holtec has at their training facility.

We have made recommendations that a utility install humidity probes in the vacuum lines and at least look at moisture levels after the pump has been valved off.

I have no idea if DOE will follow up on any of these recommendations or not and if they do, with whom or how they will do the contracting.

PNNL is supposed to receive some funds from DOE next FY to work on a radiolysis model. The idea is that we guess at various quantities of water and their location and phase (liquid or vapor) and see what radiolysis might do in generating oxidizing species. But that is the extent of the planned workscope related to drying.

So, I think that leaves PNNL available to help NRC and CNWRA without there being any COI.

I know one activity I was having some folks here at PNNL do for me a few years back on the Yucca Mountain Project was to develop a combination of surface acoustic wave, electrical impedance, and Raman spectroscopy to be able to detect and quantify the water in thin surface films during tests we were doing on humid air corrosion of fuel and cladding. Initial results were looking pretty good when we had to stop that work.

So, yes, we would be interested in pursuing this.

Thanks,

Brady