

EXPRESSION OF INTEREST (EOI) DOUBLE-SHELL TANK INTEGRITY PROJECT PRIMARY BOTTOM NON-DESTRUCTIVE EXAMINATION SYSTEM

Questions and **Answers**

August 24, 2016

Revision 0

Which organization(s) other than WRPS will attend the Demonstration in October (if any)?

It is anticipated that only WRPS and ORP personnel will attend each individual vendor presentation.

Will the proposed system be required to physically access 100% of the channels?

As presented in the EOI - The initial goal is to provide visual inspection capability that covers all air channels to the center of the tank, but it is recognized the configuration of AY series tank channels may limit the radial penetration of some technologies. It is preferred that proposed systems reach the center of the AY tank configuration but the inability to do so will not automatically disqualify a system from consideration.

Are there any additional specifications for the refractory channel dimensions available?

Reference the answer in other questions e-mail plus the following identifies the length of the air channel sections:

	Outer Course	Middle Course	Inner Course
AY Configuration	16'9"	12'0"	7'0"
AZ Configuration	13'3"	10'3"	12'3"

What are the sizes of the circumferential channels in the refractory bed?

For the AY design, the outer circumferential slot is 1.5" wide by 1.5" deep like the outer radial slots and the inner circumferential slot is 2" wide by 1.5" deep like the middle radial slots. Figures 3 and 4 of the Expression of Interest have additional details.

What is the size and distribution and number of risers into the tank?

Riser access for large equipment into the annulus space is limited to two 24" risers and two 12" risers. These risers are spaced equidistant around the circumference with the two 24" and two 12" spaced 180 opposite from each other. Beyond that, there are many smaller inspection risers utilized to deploy cameras that are either 3" or 6" (often 8-12 of these per tank). It is expected that equipment can be deployed through a 24" or 12" riser. See the fourth paragraph of the Expression of Interest.

Can we assume that blocked channels will be left (i.e. no attempt to unblock)?

If a channel is blocked by debris or spalled material, that channel would likely be skipped depending on equipment capability. It is envisioned that some equipment may be capable of overcoming light debris. Efforts to remove material from the channel or mine a path where one isn't readily available are not being considered at this time.

What are the working temperature, humidity and radiation levels in the annulus and in the refractory material?

The maximum values to consider for equipment deployment into the annulus are as follows:

Temperature: 150 °F

Humidity: The tank annulus is actively ventilated, so it will vary with the ambient temperature outside in the region throughout the year.

Radiation: Maximum expected dose rate is 300R/hr but most tanks will be closer to 50R/hr given lower radionuclide loading.

In order to respond to this RFI we will be divulging commercially sensitive and in some cases proprietary information that we would not want to be shared with third party organizations, specifically competitors. Can WRPS provide assurance that none of the information or materials provided as part of our RFI response or for any subsequent site demonstration, will be divulged to third party organizations? Can WRPS describe the measures that will be taken to ensure confidentiality and protect suppliers confidential and proprietary information during the RFI and demonstration stages?

WRPS does not share information and is treated as business sensitive. Internal policies and procedures are in place to ensure information and materials are protected. Please mark any business sensitive material as such. All information is stored in a controlled area with restricted access.

The EOI refers to the selection and funding of one or more promising solutions with an anticipated 6 month timeframe to demonstration. What is the anticipated budget for this funding?

The budget is not definitive. Vendors should provide estimates of cost and schedule necessary to advance technology to the point it can be functionally demonstrated in a cold prototypical tank test facility.

We understand that the procurement for the mock up/test bed has been cancelled. Please confirm. There will be a test facility available during the vendor forum that will include a portion of simulated double shell tank wall, knuckle, and bottom steel plus an air channel network that may be used to demonstrate attributes of proposed technologies.

What are WRPS requirements/plans for demonstration/testing of technologies if the mock up/test bed is unavailable?

See answer to above question for initial vendor forum support. WRPS will develop a prototypic test facility that will be ready for demonstration testing of the prototypic technologies selected to proceed to the next phase of development.

Can you indicate if this is intended to be a research and development project (i.e., development of technologies over months/years that could ultimately be used for the inspection purpose), or are you expecting retail or near retail products/capabilities that could be used for the inspection task in relatively short order?

This is intended to involve near term technology adaption of existing, proven equipment that can be demonstrated in a prototypic cold (non-radioactive) environment in 6 to 9 months. Following successful demonstration in a cold environment, it is expected that the technology will be deployed in a real Hanford double-shell tank annulus within the following 12 months.