

ORSSAB Member Is Recognized Expert in Liquid Rad Waste Disposal

For a guy with no formal training in the nuclear industry, ORSSAB member Chuck Jensen has done all right for himself, becoming a recognized expert in the area of liquid radioactive waste management.

As a student at Iowa State University, studying economics, Chuck was asked by a friend if he'd be interested in a job as an operator at the Ames Laboratory Research Reactor. Even though he had no background in the field he applied and got the job. He worked there several years advancing to senior reactor operator until the facility was the first in the country to be decommissioned to greenfield status.

With the closing of the reactor, Chuck got a job on the railroad, but when President Carter signed a grain embargo against the Soviet Union that stopped most of the rail traffic in Iowa.

He had previously been offered a job with Chem-Nuclear in South Carolina, so when the railroad job went away he contacted the company. He worked there about a year then set out to form his own business, Valley Nuclear, which designed and operated liquid radioactive waste systems at commercial power plants.

Less than a year later the company was bought out by another, "which was pretty good considering I didn't have any revenue or customers, but I did have designs and operating experience," he said.

Chuck then formed another, similar company, which went public in 1988. "I really didn't want to work with a public company, so several of the key employees and I started Diversified Technologies Services," he said. "The company operated in Maryland for about two and half years, and when we were ready to expand we looked at

several areas and decided on Knoxville-Oak Ridge because of the critical mass of nuclear companies here." DTS is located in the Karns-Hardin Valley industrial area off Pellissippi Parkway.

Chuck says while the company remains focused on liquid radioactive waste processing, it has also developed innovations in ultra filtration and reverse osmosis for liquid rad waste processing.

DTS is an international business with customers in Mexico, Canada, Korea, and Japan, as well as all over the United States. In fact, DTS has played



ORSSAB member Chuck Jensen stands beside a Radwaste Reverse Osmosis System that his company, DTS, manufactures to remove radioactive isotopes from contaminated water.

a role in the cleanup of the Fukushima Daiichi nuclear power plant in Japan. "After the tsunami, we were contacted by Westinghouse and GE Global on the availability of demineralizer filter systems, which are unique in the nuclear industry." The demineralizers are self-contained units with pumps and process vessels that are placed underwater to remove radioactive isotopes from the water. "Production and delivery of a unit usually takes six to eight weeks. We delivered 32 units in eight weeks," he said. Some were built at DTS while others were built by subcontractors. "We basically commandeered 100 percent of their capabilities for a couple of months."

DTS is building and installing two large systems for the Army at the Holston Arsenal for cleanup of process water before it goes into the Holston River. DTS also installed liquid rad waste systems for six of the new nuclear power plants in South Korea.

It's that kind of work, and the fact that he has delivered 45 papers to professional organizations, that earned Chuck recognition by the American Society of Mechanical Engineers with the Sarge Ozker Award in 2011 for lifetime achievement for contributions to waste processing in the commercial nuclear industry.

As for ORSSAB, Chuck currently serves as the secretary of the board and is a member of the EM Committee. "I enjoy it a lot. The nature of the work that is done on the reservation holds a high degree of interest for me because of the type of work we do at DTS.

"Unfortunately I haven't been able to contribute as much as I want. When I got on the board in 2007 I thought the business had plateaued somewhat, but that turned out not to be true. On the one hand

that's good, but on the other I haven't been able to make the contributions that I would like."

Despite Chuck's concerns, he is an active participant in board and committee discussions, and his views are heard and respected by his board colleagues. He's also written a recommendation and provides insight and input on recommendations discussed by the board.

For time away from DTS and ORSSAB, his main interest is flying. He owns a six-passenger turbo-prop airplane that he uses frequently for business. 