EM UPDATE
U.S. DEPARTMENT OF ENERGY | OFFICE OF ENVIRONMENTAL MANAGEMENT

Hanford Marks 2022 Priority, Treats First Batch of Tank Waste

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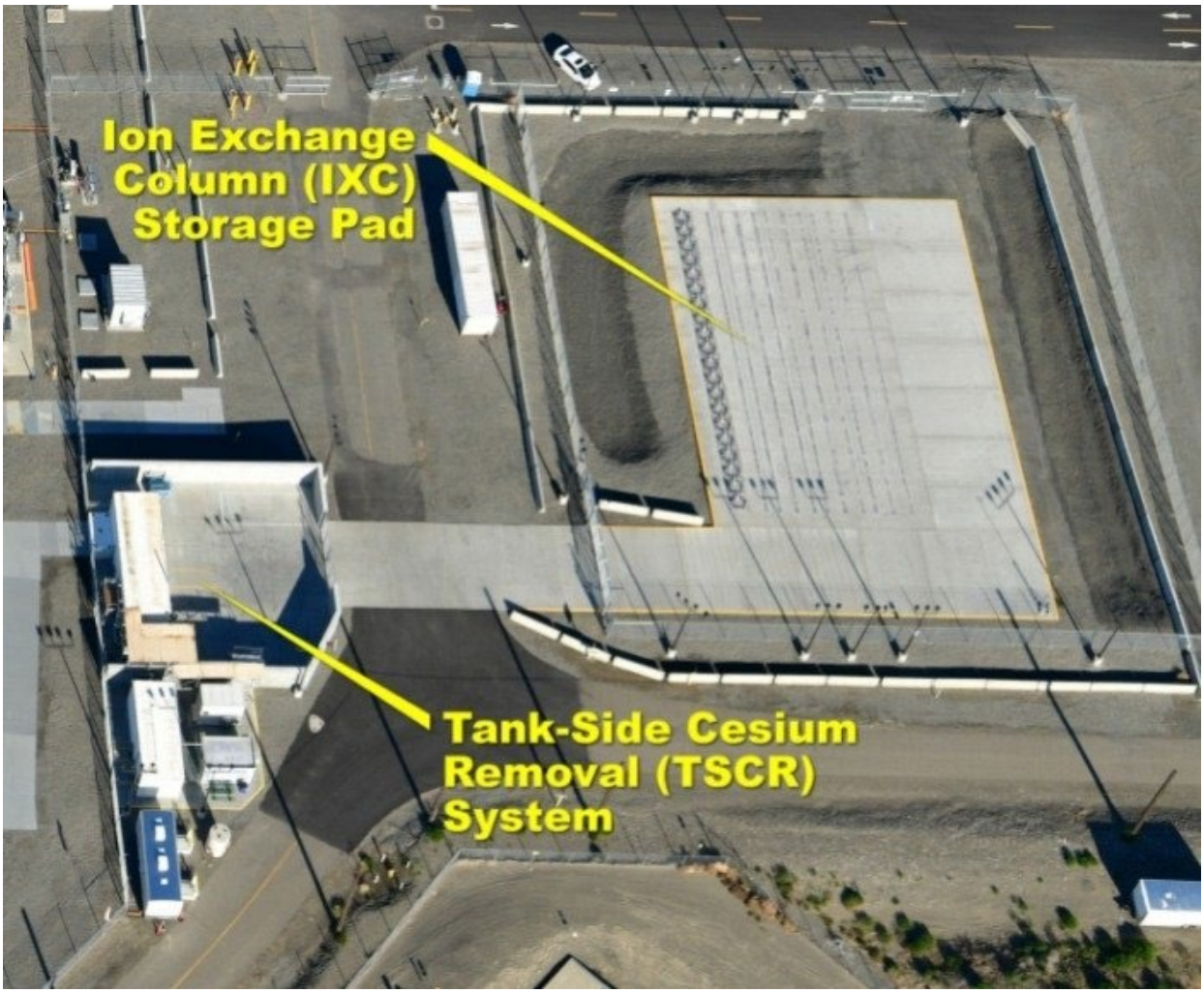

The Tank-Side Cesium Removal (TSCR) System is located next to an underground tank farm in the 200 East Area of the Hanford Site. The ion exchange column storage pad is adjacent to the system.

RICHLAND, Wash. – The first batch of approximately 200,000 gallons of tank waste has been

treated by the **Hanford Site**'s Tank-Side Cesium Removal (TSCR) System and is staged in a double-shell tank for immobilization in glass when the Waste Treatment and Immobilization Plant begins vitrifying waste. This marks a significant point in the treatment process that began in late January.

Between batches, workers have changed out two of TSCR's three ion exchange columns. The specially designed columns are filled with very small resin beads that remove cesium from the waste. Once the beads reach maximum cesium capacity, the columns are considered "spent," and they are replaced with new ones.

Workers with Hanford Site tank waste contractor Washington River Protection Solutions remove the first cesium-filled ion exchange column from the Tank-Side Cesium Removal System.

“Our calculations for how fast the ion exchange columns would need to be changed out was approximately once a month.” said Janet Diediker, TSCR federal project director for the **EM Office of River Protection** (ORP). “We are very pleased with the process and how well TSCR is working to support our preparations to vitrify tank waste for disposal.”

The column removal and reinstallation process takes about two weeks. After the tank waste feed to TSCR is cut off and waste in the system is drained, the columns are rinsed, blown out and dried. Workers with ORP tank waste contractor Washington River Protection Solutions (WRPS) use a special forklift to remove the spent columns and move them to a nearby storage pad.

The 27,000-pound columns are secured to metal holders known as cleats for safe storage until they are moved for permanent disposal. Workers then place new columns in TSCR to begin processing the next batch of tank waste.

The first two spent ion exchange columns from the Hanford Site’s Tank-Side Cesium Removal System are placed on a concrete pad for safe storage.

“Our workers started practicing the removal and installation procedure months before TSCR operations began,” said Matt Cuttlers, TSCR operations manager for WRPS. “All of the training paid off with a safe and successful first change-out, and having successfully treated the first batch is a great feeling.”

TSCR startup in January marked completion of the first Hanford accomplishment in an aggressive slate of **2022 EM priorities** to advance the cleanup mission. The system is a key component in Hanford’s **Direct-Feed Low-Activity Waste** (DFLAW) Program to treat tank waste.

EM and WRPS are scheduled to treat seven batches of tank waste totaling approximately 1 million gallons through TSCR over the next several months.