HANFORD COMMUNITIES WINTER 2022 NEWSLETTER

RICHLAND • WEST RICHLAND • KENNEWICK • PASCO • FRANKLIN COUNTY • BENTON COUNTY • PORT OF BENTON

IN THIS ISSUE:

- 01 New Era in Hanford Tank Waste Treatment
- 03 DOE Estimates \$100s of Billions Needed to Finish Hanford Nuclear Waste Cleanup
- 04 Hanford Completes Historic Cleanup at Iconic Plutonium Finishing Plant
- 05 Congress Adopts Record High Budget to Clean Up Hanford
- 06 All Hanford Double-Shell Tank Farms Now Equipped with Upgraded Ventilation Systems
- 07 A Safer Solution: Radioactive Capsule Transfer Project at Hanford Moving Forward
- 09 Seventh Hanford Reactor Building "Cocoon" Foundation Taking Shape
- 10 Tri-City High School Student's Hanford Documentary Premieres on the Big Screen



Washington River Protection Solutions operations engineer Steven Porter, left, and nuclear chemical operator Brent Walker monitor the Tank-Side Cesium Removal System in the control room as the system is put in operations mode.

THE HANFORD SITE | U.S. DEPARTMENT OF ENERGY NEW ERA IN HANFORD TANK WASTE TREATMENT

Tank-Side Cesium Removal (TSCR) System near the AP Tank Farm – the first step in the Direct-Feed Low-Activity Waste (DFLAW) Program to treat tank waste.

The Department of Energy (DOE) announced in January that workers have begun the first large-scale treatment of radioactive and chemical waste from large underground tanks at the Hanford Site. This marks completion of the first of an ambitious slate of 2022 priorities set by the DOE Office of Environmental Management (EM).

In a message of congratulations to the Hanford workforce, Senior Advisor for EM William "Ike" White called the Tank Side Cesium Removal (TSCR) System a "cornerstone of the Direct Feed Low Activity Waste program".

"It's a capability that will transform the Hanford Site and benefit the entirety of the EM program," White said. "I'm optimistic about what Hanford will achieve this year as we work toward around-the-clock operations to treat tank waste."

The newly operational TSCR System removes radioactive cesium and solids from tank waste. The treated waste will be fed directly to the nearby Waste Treatment and Immobilization Plant for vitrification, or immobilization in glass, when the plant comes online next year.

"NEW ERA" - CONTINUED (PAGE 1)

The cesium removal system is a key part of the Site's Direct Feed Low Activity Waste (DFLAW) program, an assembly of several highly interdependent projects and infrastructure that will operate together to vitrify and safely dispose of millions of gallons of low-activity tank waste once operational.

"This is an exciting new era in our Hanford cleanup mission," said Brian Vance, manager of EM's (DOE's) Office of River Protection and Richland Operations Office. "For the first time in Hanford Site history, we are treating a significant amount of tank waste on an industrial scale."

Hanford tank operations contractor Washington River Protection Solutions (WRPS), working with EM staff, other site contractors and regulatory agencies, built, installed and tested the cesium removal system next to large underground storage tanks. Those tanks, called the AP tank farm, are located near the center of the Hanford Site, which is less than a guarter mile from the vitrification plant. The cesium removal technology is nearly identical to a system operating at DOE's Savannah River Site in South Carolina.

John Eschenberg, WRPS president and CEO, said the launch of the TSCR system operations was nearly three years in the making.

"I'M EXTREMELY PROUD OF OUR TEAM, THE DEDICATED WORKFORCE WHO DELIVERED THIS PROJECT ON TIME AND ON BUDGET DURING SOME CHALLENGING TIMES OVER THE LAST 18 MONTHS," ESCHENBERG SAID.

The Hanford Site is home to approximately 56 million gallons of radioactive tank waste stored in 177 underground tanks, representing one of DOE's largest environmental risks and most complex challenges. The tank waste is a result of nearly five decades of plutonium production that supported national security missions and helped end World War II.

An animated video showing how the cesium removal system fits into the highly integrated Direct-Feed Low-Activity Waste Program at Hanford can be viewed here.

ECOLOGY'S "LET'S TALK ABOUT HANFORD" SERIES CONTINUES

DEPARTMENT OF

ECOLOGY

State of Washington



Featuring Amena Mayenna LERF/ETF Environmental Engineer and Permit Lead Andrew Pomiak 242-A Evaporator Environmental Permit Lead

MARCH 30, 2022

LERF/ETF AND

A conversation with you

242-A EVAPORATOR

Over 26 million 98

OF TANK WASTE REDUCED since

Ready to step into the world of Hanford cleanup? In the next edition of Let's Talk About Hanford, attendees will be learning about several important Hanford cleanup facilities, the Liquid Effluent Retention Facility, Effluent Treatment Facility, and the 242-A Evaporator.

For this conversation, we're bringing on several of our Nuclear Waste Program experts, including LERF/ETF Environmental Engineer and Permit Lead Amena Mayenna and 242-A Evaporator Environmental Permit Lead Andrew Pomiak.

WHEN: Wednesday, March 30, 5:30pm WHERE: Online via Facebook & Zoom



DOE ESTIMATES \$100S OF BILLIONS NEEDED TO FINISH HANFORD NUCLEAR WASTE CLEANUP

SHARED FROM THE TRI-CITY HERALD, BY ANNETTE CARY

Completing cleanup of the Hanford nuclear reservation will cost an estimated \$300 billion to \$640 billion, according to a new Department of Energy report.

The Hanford Lifecycle Scope, Schedule and Cost Report published at the end of January is the first in three years. It drops the projected remaining cost from a range of \$323 billion to \$677 billion in the 2019 report as DOE re-evaluated work based on what it learned over the last three years.

That is after the 2019 lifecycle report tripled the estimated cost from the previous 2016 report, which put costs at \$108 billion to complete most remaining cleanup by 2066. The report, required by the legally binding Tri-Party Agreement, figures the remaining cost and a schedule for remaining environmental cleanup of the nuclear reservation, giving what DOE considers its best case and worst-case scenarios.

The current estimate is for completing most cleanup by about 2078 plus the initial continued monitoring of the site through 2095. The 580-square-mile Hanford site adjacent to Richland in Eastern Washington was used to produce almost two-thirds of the plutonium for the nation's nuclear weapons program from World War II through the Cold War.

ENVIRONMENTAL CLEANUP

Now DOE is spending about \$2.5 billion annually on environmental cleanup of radioactive and other hazardous chemical waste and contaminated buildings, soil and groundwater. But the estimated costs to finish most cleanup by 2078 would require much larger annual budgets.

The dramatic jump in cleanup costs three years ago was attributed mostly to the increased cleanup costs for the 56

million gallons of radioactive waste in underground tanks. The tanks must be emptied, the tanks closed in place or removed, and then the waste treated for permanent disposal.

Current plans call for much of the waste to be turned into a stable glass form at the Hanford Waste Treatment Plant, or vitrification plant, which has been under construction in the center of Hanford since 2002. DOE faces a court order to start up the plant to initially treat some of the least radioactive waste by the end of 2023, unless more time is allowed due to delays caused by the COVID-19 pandemic.

The new report says that improvements in how the glass will be formulated will lead to more waste in each immobilized glass containers, reducing the number of waste-filled containers that need to be produced.

COST SAVINGS

That and revised cost estimates for operating the vitrification plant provide cost savings, the report indicated. DOE also pointed out that the report takes into account work completed over the last three years. Among accomplishments was finishing the demolition of the Plutonium Finishing Plant, where plutonium in a liquid solution was processed into a solid form for shipment off site to weapons production facilities.

The report also projects that less money will need to be spent on treatment of contaminated groundwater than in earlier projections, as Hanford workers have consistently exceeded goals on that work. The report projects spending at Hanford will peak in about eight years at about \$7.5 billion, nearly triple the amount Congress is currently budgeting for the site, under the most optimistic estimate of \$300 billion. Spending would be above \$4 billion from 2023 through 2069, according to



HANFORD COMPLETES HISTORIC CLEANUP AT ICONIC PLUTONIUM FINISHING PLANT

FROM THE OFFICE OF ENVIRONMENTAL MANAGEMENT

Workers with EM Richland Operations Office (RL) contractor Central Plateau Cleanup Company (CPCCo) recently completed final demolition activities at Hanford's former Plutonium Finishing Plant (PFP), literally putting a cap on what was once one of the most hazardous facilities in the EM cleanup complex.

Final project demobilization and documentation activities – including pressure-washing equipment, surveying for contamination and removing fencing – were completed in December.

In November, crews spread more than 900 truckloads of sand and gravel over the plant's footprint, which once included four large facilities and several support buildings that produced nearly two-thirds of the nation's supply of plutonium metal and oxides. The thick cover of sand and gravel is fortified with a fixative to protect the environment from any residual contamination and limit the effects of water, wind and heat until underground waste sites are remediated.

"So many people have contributed to this critical risk-reduction project over the years," said Tom Teynor, RL federal project director. "Completing the demolition, cleanup and capping of the plant site is a testament to the remarkable tenacity, resilience and dedication of many workers, Hanford contractors, Department of Energy staff and regulatory agency personnel." Placement of the cover follows the removal late last summer of the remaining rubble from demolition of the Plutonium Reclamation Facility and soil sampling beneath the concrete slabs of that facility and the nearby Americium Recovery Facility, two of the former plant's main buildings. The demolition rubble was safely packaged and disposed at the Environmental Restoration Disposal Facility, Hanford's onsite engineered landfill.

Removal of radioactive and hazardous material from the plant site not only reduces risk on Hanford's Central Plateau, but also allows for safe access to surrounding areas for progressing other cleanup activities.

The recent progress follows the historic demolition of PFP's main processing facility in February 2020. Just weeks later — with removal of rubble from the reclamation facility about 25% complete — the worksite was placed in a safe configuration when Hanford went into a minimum essential operations posture at the beginning of the COVID-19 pandemic. The workforce remobilized to continue the work, and safety has remained the top priority.

"I'm proud of this team for maintaining a deliberate speed and staying focused on safety over these past two years," said Robert Wade, CPCCo closure manager for the PFP. "We not only successfully navigated a number of COVID-19 controls, but also safely persevered through record heat last summer. Completing this project is certainly a highlight in Hanford's cleanup history."



WATCH TIME-LAPSE VIDEO OF PFP DEMOLITION FROM OCTOBER 2016 THROUGH NOVEMBER 2021.



The Hanford nuclear reservation budget for the current fiscal year will be nearly \$128 million more than proposed by the Biden administration and about \$25 million above the fiscal 2021 budget. The U.S. Senate approved the budget as part of a massive spending bill for the fiscal year that began in October. The vote late Thursday was 68-31, which sent the bill to the president for his signature. The spending package includes a record high amount of nearly \$2.6 billion for maintenance and environmental cleanup of the Hanford site adjoining Richland in Eastern Washington.

But even that amount falls shy of cleanup costs, Sen. Patty Murray, D-Wash., pointed out in budget hearings. Congress would need to budget for than \$11 billion a year for the next 57 years to complete Hanford cleanup, she said.

Murray is the highest-ranking Democrat on the Senate Appropriations Committee, putting her in a key position to work for Hanford environmental cleanup money. Sen. Maria Cantwell, D-Wash., also pushed for money for Hanford and supported the spending package. "A lot of presidents look at the federal budget and try to think of ways to trim costs at Hanford, but they often fail to remember the federal government's obligation to this community. I make sure they remember," Murray said in a statement after the fiscal 2022 bill was approved.

In a surprise move, the Biden administration had proposed zeroing out spending for payments in lieu of taxes this year at Hanford. But the final spending bill includes \$3.5 million in PILT payments to local governments.

Both Murray and Cantwell pressed Energy Secretary Jennifer Granholm in Senate committee hearings about the

CONGRESS ADOPTS RECORD HIGH BUDGET TO CLEAN UP HANFORD, WA NUCLEAR CONTAMINATION SHARED FROM THE TRI-CITY HERALD, BY ANNETTE CARY

administration's proposal to eliminate PILT funding this year. "I want to be clear that (PILT funding) cannot be eliminated or cut back in any way. The Tri-Cities rely on this funding, and they are owed this funding," Murray told Granholm. The nuclear reservation covers 580 square miles, mostly in Benton County, taking that land off of its property tax rolls. Smaller portions of the nuclear reservation reduce money available for Franklin and Grant counties.

"PILT funding is intended to compensate local governments for taxes that they cannot collect from the federal government," Cantwell told Granholm.

PILT is distributed by the counties for roads, rural libraries, ports, public hospital and other health services, and help for indigent veterans. But the largest chunk goes to schools. Benton County received about \$3.8 million in PILT in 2021, with about \$1.7 million going to the Richland School District.

HANFORD CLEANUP SPENDING

The spending package includes just over \$1.6 billion for the Hanford Office of River Protection, which is responsible for 56 million gallons of radioactive waste stored in underground tanks and preparations to treat and dispose of the waste.

It is an increase of \$2 million above the previous year, and \$105 million above the Biden' administration's budget request, according to Murray's staff.

It includes language requested by Murray for construction work on buildings at the \$17 billion vitrification plant that will handle high-level radioactive waste, the High-Level Waste Treatment Facility and the Pre-Treatment Facility. The language was intended to ensure compliance with the 2016 federal

"RECORD HIGH BUDGET" - CONTINUED (PAGE 5)

court consent decree, which sets deadlines for the start of treatment of radioactive waste, Murray's staff said.

The Department of Energy now is working to start treating low activity radioactive waste at the vitrification plant by the end of 2023, but also is required to have the plant fully operating, including treating high-level radioactive waste, by 2036. The bill also includes \$950 million for the work of the Richland Operations Office at Hanford, which is \$23 million above both the previous year's budget and also the administration's request for the current fiscal year, Murray's staff said.

The Richland Operations Office is responsible for operating and maintaining the site and environmental cleanup other than tank waste, which includes contaminated buildings, soil and groundwater, plus additional buried and stored radioactive waste.

HISTORIC HANFORD REACTOR

The Hanford site was used from World War II through the Cold War to produce nearly twothirds of the plutonium for the nation's nuclear weapons program. The bill also includes Murray's requested report language that \$10 million be used for the B Reactor roof replacement project to ensure that work gets done.

B Reactor, the world's first full-scale nuclear production reactor, produced the plutonium used in the Trinity Test in the New Mexico desert in July 1945 and the "Fat Man" atomic bomb dropped on Nagasaki, Japan, helping end the war days later.

The reactor is preserved as part of the Manhattan Project National Historical Park and tours are available. "I have family from the Tri-Cities," Murray said. "I'm always going to make sure we're doing right by the Tri-Cities community and Hanford workers. It was the sacrifice of this community that helped us win WWII and the cold war, so the federal government has a moral and legal obligation to clean up Hanford."



EM's Office of River Protection and tank operations contractor Washington River Protection Solutions continue to enhance safety in the Hanford Site's Tank Farms with the completion of a new exhauster ventilation system in the SY Tank Farm. All six of Hanford's double-shell-tank farms are now ventilated by upgraded exhauster systems.

OFFICE OF ENVIRONMENTAL MANAGEMENT ALL HANFORD DOUBLE-SHELL-TANK FARMS NOW EQUIPPED WITH UPGRADED VENTILATION SYSTEMS

The EM Office of River Protection (ORP) and tank operations contractor Washington River Protection Solutions (WRPS) recently began operating a new exhauster ventilation system installed in the SY Tank Farm at the Hanford Site.

The new system replaces the old exhauster ventilation system that had reached the end of its design life.

With the completion of the installation of the new system at the SY Tank Farm, all six of Hanford's double-shell-tank farms, consisting of 28 tanks, now have upgraded exhauster ventilation systems.

The systems work by continuously drawing air from a waste tank, separating moisture and radioactive particles, then sending filtered air through exhaust stacks into the atmosphere. The systems protect workers by dispersing high-efficiency particulate air (HEPA) above the breathing space of workers. They also prevent the buildup of flammable gases in the tanks.

"DOE and the contractor share a steadfast commitment to safety as we reduce risk to the environment posed by 56 million gallons of waste stored in our large underground tanks," said Delmar Noyes, EM assistant manager for Tank Farms. "The new SY Tank Farm system is much more reliable and effective than the previous system, which will help ensure continued safe operations in the farm for decades."

"UPGRADED VENTILATION SYSTEMS" - CONTINUED (PAGE 6)

SY Tank Farm is made up of three double-shell tanks built between 1974 and 1976, and the 1-million-gallon-capacity tanks began receiving waste in 1977. The tank farm is still in service and will support future retrievals and waste transfers from single-shell tanks in the western portion of a 10-squaremile industrial area known as the Central Plateau.

The SY Tank Farm project involved installing two new ventilation fans and a pair of 40-foot stacks. Workers then tied into the existing ventilation ductwork.

Tim Moberg, the project's lead engineer for WRPS, said the project team used lessons learned from the installation of previous ventilation systems in Hanford's double-shell-tank farms in the new system's design.

"The SY ventilation system has state-of-the-art components and a remotely operated control system that allows operators to check the status of all equipment in real time," Moberg said. "Another major benefit is the new system will require fewer entries into the tank farm for both operations and maintenance personnel."

Moberg, who was part of the project team for the installation and upgrades at each of Hanford's other double-shell-tank farms, said the team faced several challenges that were addressed through collaboration.

"We had to design around a lot of underground interferences and tie into old electrical systems and existing ventilation lines." he said. "Teamwork was key to the project's success. We had excellent communication and collaboration between DOE and our construction, maintenance, engineering, radiological controls, industrial hygiene and safety teams."

A SAFER SOLUTION: RADIOACTIVE **CAPSULE TRANSFER PROJECT AT HANFORD MOVING FORWARD OFFICE OF ENVIRONMENTAL MANAGEMENT**

Preparations are well underway to transfer nearly 2,000 highly radioactive capsules from the Waste Encapsulation and Storage Facility (WESF) to interim dry storage at the Hanford Site.

Over the past several months, workers with EM



Workers recently installed manipulator equipment at a full-scale mock-up of areas of the Hanford Site's Waste Encapsulation and Storage Facility that will be used to move nearly 2,000 radioactive capsules from underwater storage, into steel and concrete casks and

Richland Operations Office (RL) contractor Central Plateau Cleanup Company (CPCCo) completed a number of modifications to the facility needed to install a system that will move the capsules from the underwater basin, into dry-storage casks, onto trucks and into a new storage area close to the facility.

Last fall, crews completed final construction activities at the dry-storage area. Additional upgrades are needed at WESF's truck transfer area to enable the half-mile trip to the drystorage concrete pad.

HANFORD COMMUNITIES NEWSLETTER | WINTER 2022

loaded onto a truck for a short trip to a secured storage area near the facility.

The 1,936 capsules have been stored in an underwater basin at WESF since the mid-1970s. Cesium and strontium were removed from Hanford waste tanks to reduce the internal temperature. While the capsules are currently in safe storage in the underwater basin, moving them to dry storage eliminates a longer-term risk of a radioactive release in the unlikely event of a loss of water from the basin during a largerthan-expected earthquake.

"A SAFER SOLUTION" - CONTINUED (PAGE 7)



Jason Beaver and Pedro Ramirez with EM Richland Operations Office contractor Central Plateau Cleanup Company construct wooden forms for a new concrete pad outside the Waste Encapsulation and Storage Facility where trucks will pick up casks filled with radioactive capsules for the short trip to a nearby dry-storage area.

Check out <u>this animation</u> to learn more about the capsule transfer process.

"We're encouraged by the pace of progress on this critical risk-reduction project," said Gary Pyles, RL project manager. "Transferring the capsules to the new dry-storage pad will not only enable the planned deactivation of the aging WESF facility, but also save as much as \$6 million in annual operating costs."

Progress also continues at a full-scale mock-up about 15 miles south of WESF at Hanford's Maintenance and Storage Facility. It is designed to replicate the areas of WESF that the capsules will be moved through while transferring them into dry-storage casks and putting the casks on trucks. The mock-up includes a replica shielded hot cell, an operating "canyon," and a truck loading area. It is designed to look and feel exactly like the real thing, so workers can test and practice to get comfortable with the system before going live in the WESF facility.

Mock-ups are used extensively at Hanford to allow workers to safely train, test equipment and develop procedures before performing the work in a contaminated environment. The use of mock-ups has been proven to reduce potential worker exposures to hazards in radiological zones and significantly reduce the potential for delays during the fieldwork due to modifying procedures, processes or equipment.

Workers at the mock-up recently installed four mechanical manipulators that are part of a system that will transfer the underwater capsules from the basin to stainless-steel-andconcrete casks for transfer to the new storage area.

Fabrication of other capsule transfer test equipment is almost complete, with the system components expected to arrive at the mock-up for installation and testing this spring.

"There has been a ton of activity going on at WESF, the mockup and at our offsite equipment fabricators this fall and winter," said Mark Buckmaster, CPCCo capsule transfer project manager. "Our talented teams are making terrific progress on all fronts to prepare to safely move these capsules into dry storage. We're excited to keep moving forward on one of Hanford's priority risk-reduction projects."

"FINISH HANFORD NUCLEAR WASTE CLEANUP" - CONTINUED (PAGE 3)

projections. Under the high range estimate of \$641 billion, spending would be at least \$6 billion a year from 2023 through about 2068.

PEAK SPENDING

Peak spending under that projection would be more than \$16 billion a year in about 2059. Much of the remaining cost will be for tank waste from emptying tanks through treating the waste for disposal. Under the low estimate, \$219 billion of the \$300 billion cost would be related to tank waste. The remainder of Hanford work — ranging from basic operations of the site to

tearing down contaminated buildings — could still cost more than \$2 billion in the peak year of about 2033.

The report now has been sent for review to the Washington state Department of Ecology and the Environmental Protection Agency, both regulators of the Hanford site. A 60-day public comment period on the report will begin on Feb. 15. Feedback can be emailed to lcssc@rl.gov, according to the report, which DOE has not yet posted on its website. The public comments will be considered as DOE drafts the next Hanford lifecycle report to be released in 2025.

SEVENTH HANFORD REACTOR BUILDING "COCOON" FOUNDATION TAKING SHAPE OFFICE OF ENVIRONMENTAL MANAGEMENT

The Richland Operations Office (RL) and cleanup contractor Central Plateau Cleanup Company (CPCCo) are off to a strong start on one of EM's key construction priorities for 2022, with workers preparing to safely enclose, or "cocoon," the seventh of nine former reactors on the Hanford Site.

Watch <u>this video</u> for more on this critical construction project.

Crews have completed backfilling and compacting the area around the former K East Reactor with approximately 34,000 cubic yards of a sand and gravel mixture. This month, workers began pouring a 6-foot-thick concrete foundation to support construction of a massive steel structure over the reactor building. The foundation will be completed in multiple pours over the next month. The steel enclosure is designed to protect the reactor building while the radioactivity in the reactor core decays over the next several decades, making it safer and easier to complete disposition of the reactor in the future.

"A mild winter has allowed us to make excellent progress on this critical risk-reduction project," said Mark French, RL Division director for Hanford's Central Plateau Cleanup Project. "Placing the K East Reactor in interim safe storage is a key component of our mission to complete cleanup along the Columbia River."



"It's exciting to see this project really starting to take shape," said Travis Creach, CPCCo construction manager. "We expect to complete the foundation in March, with work on the enclosure set to begin this spring."

An artist's rendering of the K East Reactor safe-storage enclosure. K East will be the seventh of Hanford's nine former reactors to be placed in interim safe storage.

<image>

Workers with EM contractor Central Plateau Cleanup Company pour concrete for a 6-foot-thick foundation to support a massive steel structure over the former K East Reactor building. The enclosure is designed to protect the building while the radioactivity in the reactor core decays over the next several decades, making it safer and easier to complete disposition of the reactor in the future. The project is one of EM's top construction priorities for 2022.

The K East Reactor operated from 1955 to 1971 and will be the seventh of Hanford's nine former reactors to be placed in interim safe storage. The K West Reactor will be the eighth. The ninth Hanford reactor, the B Reactor, is now a national historical landmark and part of the Manhattan Project National Historical Park.

The K East Reactor cocooning project is expected to be complete by the end of the year.

LOOKING FOR MORE WAYS TO CONNECT?



Hanford Events CalendarSee upcoming events andpublic engagementGO!



Hanford Virtual Tours Tour the Hanford Site virtually from your device **GO**!

FOLLOW US ON SOCIAL MEDIA

@hanfordcommunities
Hanford Communities

TRI-CITY HIGH SCHOOL STUDENT'S HANFORD DOCUMENTARY PREMIERES ON THE BIG SCREEN SHARED HERALD



Augustin Dulauroy courtesy Pindare Films

A Tri-Cities filmmaker had the premiere of his first feature-length documentary at Fairchild Cinemas in Richland in February, with showings extending through March 2022. He is 17 and the president of the Hanford High Video Production Club.

Augustin Dulauroy has been making short videos with friends since middle school and had a short film he directed selected for the All American Film Festival in New York last fall. But he wanted to try making a documentary after he worked as sound engineer and videographer for a documentary on the Le Mans sports car race in France. It was written and directed by his mother, Virginie Dulauroy.

"After a little thinking I realized that the perfect documentary topic was where I live," Dulauroy said.

The result is the 52-minute documentary "Hanford," billed as a story of success and failure. During World War II, workers at the Hanford site in Eastern Washington raced to produce the plutonium for the atomic bomb dropped on Nagasaki, Japan, helping to end the war. But plutonium production then and through the Cold War at the nuclear reservation adjoining Richland came at a cost.

Settlers and Native Americans were forced from their land. Radiation sickened some people. And \$2.5 billion is spent annually on environmental cleanup of the 580-square-mile site. Stories of secrecy at the nuclear reservation drew Dulauroy into the Hanford story, he said. He interviewed experts on Hanford like Robert Franklin, president of the B Reactor Museum Association and professor at Washington State University Tri-Cities, and health physicist Ron Kathren, the first professor emeritus for WSU Tri-Cities.

Dulauroy said he looked for untold stories about Hanford, or at least stories that are little known outside the Tri-Cities.

The film premiered Feb. 28 at Fairchild Cinemas in Richland. In the next two days it sold out with more screenings shown every day. It can still be seen in the Tri-Cities, with screenings set Wednesday and Thursday afternoons and evenings at the Southgate Fairchild Cinemas in Kennewick.



The documentary "Hanford" premiered Feb. 28 at Fairchild Cinemas in Richland.

The documentary was also released on Amazon Prime Video USA on March 2 and on Vimeo-On-Demand Worldwide March 3. Dulauroy says he'd like a career as a filmmaker. But knowing that is a tough field to break into, he plans to keep his options open when he graduates from Hanford High this spring. He's also interested in science and history, he said.