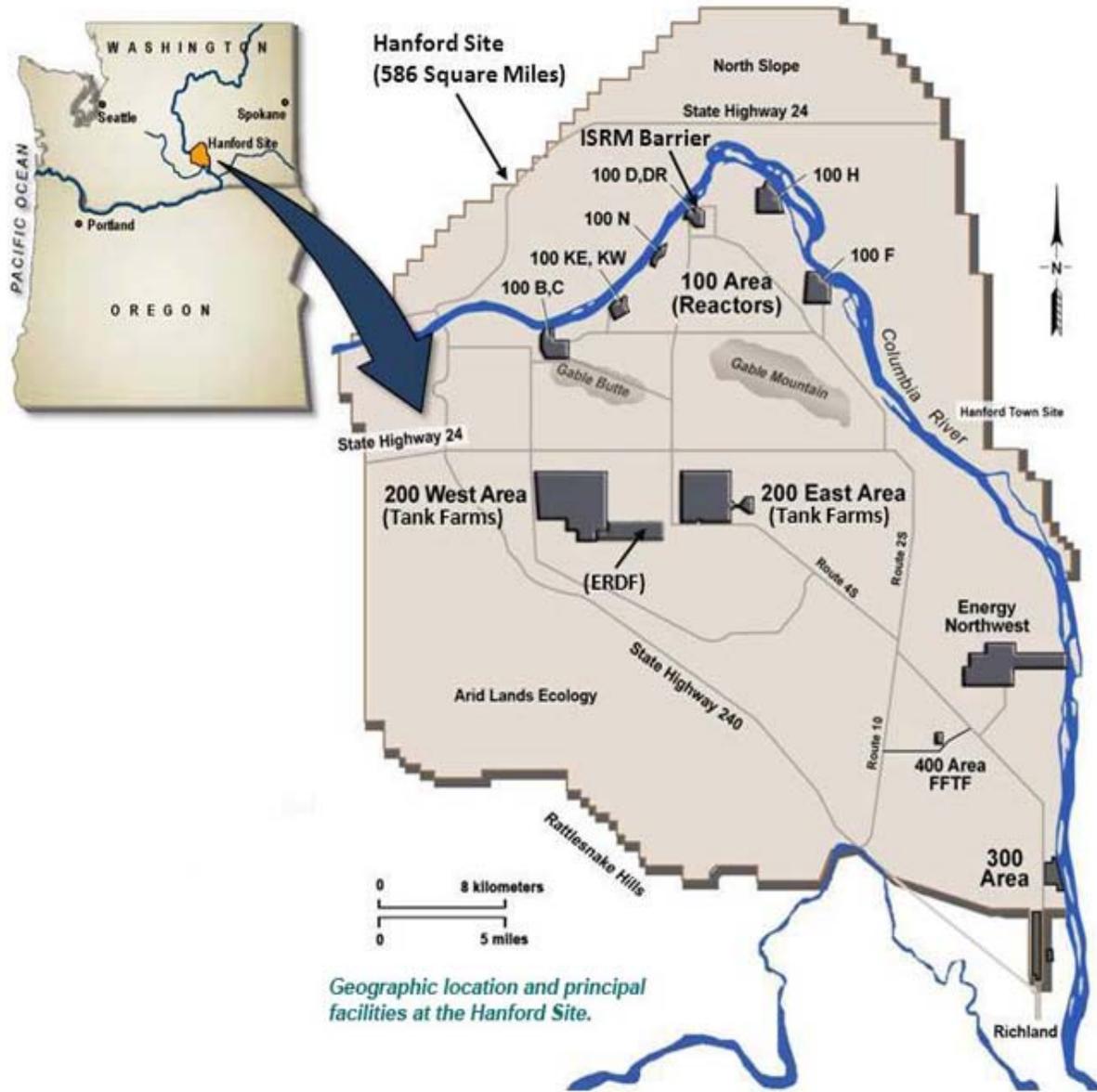




# DOE INCIDENT

## May 9-10, 2017

Hanford 200 East Emergency



# History of Hanford

- ▶ The Hanford Site sits on 586-square-miles of shrub-steppe desert in southeastern Washington State. Beginning in 1943, the site was used to produce plutonium for the bomb that brought an end to World War II. After a short lull, production was ramped up in 1947 to meet the challenges of the “Cold War” and continued until 1987 when the last reactor ceased operation.
- ▶ Weapons production processes left solid and liquid wastes that posed a risk to the local environment including the Columbia River. In 1989, the U. S. Department of Energy (DOE), Environmental Protection Agency (EPA), and Washington State Department of Ecology entered into a legally binding accord, the Tri-Party Agreement (TPA), to clean up the Hanford Site.

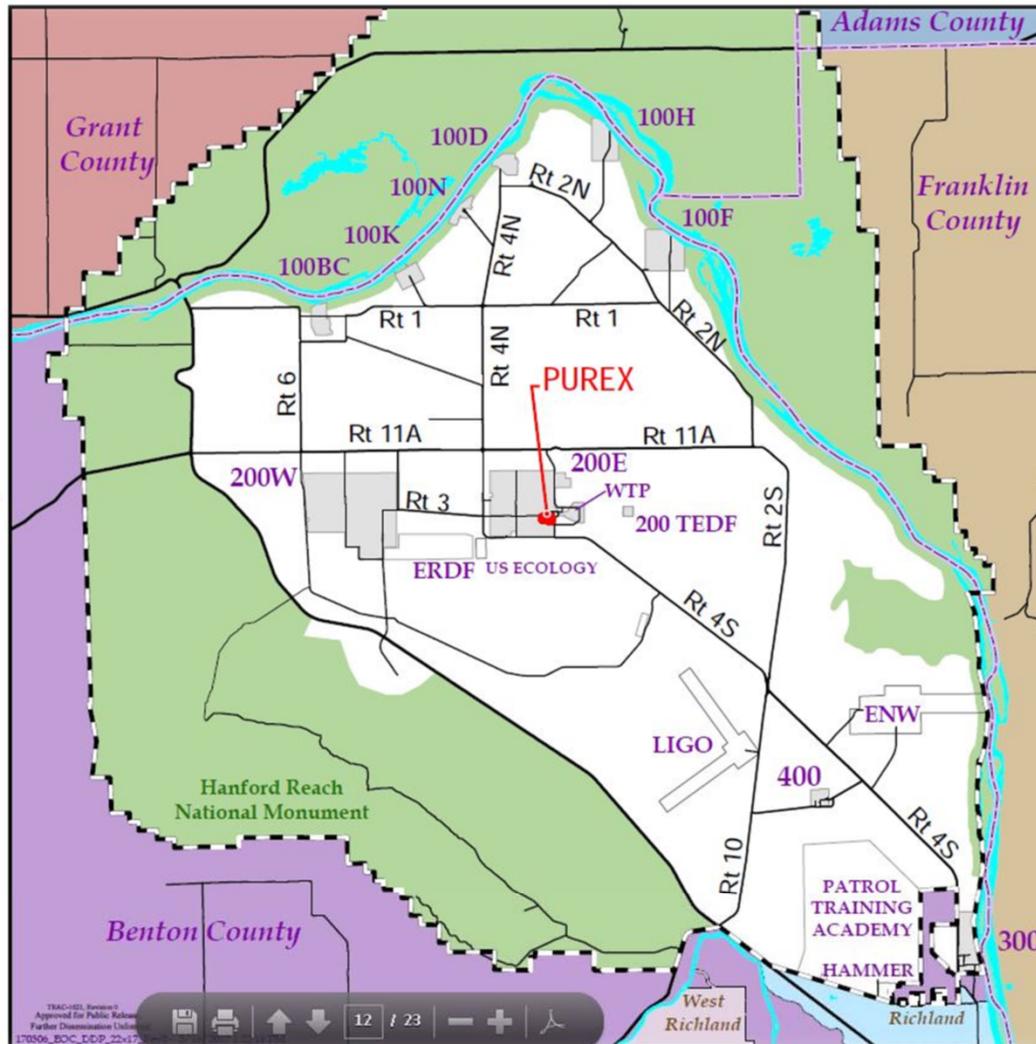
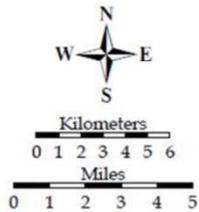
# Plutonium Uranium Extraction Plant (PUREX)

- ▶ Built in the early 1950's, the facility went into operation in 1956. From 1956 to 1972, and again from 1983 until 1988, PUREX processed about 75% of the plutonium produced at Hanford. Some scientists believe that more plutonium was processed at PUREX than any other building on the planet, as it processed more than 70,000 tons of uranium fuel rods during its operations.
- ▶ The building has been vacant for nearly twenty years, but it remains highly contaminated. Its walls are surrounded by razor wire and barbed wire fences.
- ▶ Several rail cars temporarily buried inside a tunnel #1 next to PUREX. Contains highly contaminated equipment, (concentrators, tube bundles, jumpers, etc.)

# 202-A Plutonium Uranium Extraction Complex (PUREX)

Distance from N. Richland  
19 mi

Distance from Columbia River  
6.8 mi



# PUREX



# PUREX Tunnel #1

- ▶ Built 1954-1956 and filled 1960-1965
- ▶ 358 feet long, 22 feet high x 19 feet wide
- ▶ Ceiling & majority of walls composed of 12 x 14 inch creosote treated timbers
- ▶ 90-pound roofing material and tar laid over timbers
- ▶ Approximately 8 feet of overburden placed on top
- ▶ Holding 8 railroad cars (40-42 feet each)



# May 9, 2017 Hanford 200 East Alert Level Emergency

- ▶ 0838 - SECOMM (Benton County), Franklin County Dispatch and the State Alert & Warning Center received a “CRASH” call declaring an ALERT level Emergency on the Hanford Site due to a collapse of a 20-foot section of a tunnel used to store contaminated Materials. The 360 ft. tunnel is located next to the PUREX facility in the 200 East Area.
- ▶ 0842 - SECOMM made notifications to BCEM and response agencies per procedures - to respond to the Emergency Operations Center (EOC).
- ▶ 0845 - State EOC (SEOC) Alert & Warning Center made notifications per procedures and begins activating the State EOC.
- ▶ 0846 - Franklin County Dispatch notified FCEM
- ▶ 0848 - FCEM initiates calls for response to the Emergency Coordination Center (ECC)

# May 9, 2017 Hanford 200 East Alert Level Emergency

- ▶ 0905 - FCEM sends a representative to the Joint Information Center
  - ▶ Jacque Cook with FCEM acted as JIC spokesperson - and if necessary would represent both Franklin County and Benton County at the JIC.
- ▶ 0910 - DOH staffs DOE EOC & JIC, SEOC, & DOH ACC
- ▶ 0915 - BCEM sends a representative to the DOE EOC
  - ▶ Chief Lonnie Click (BCFPD#1) responds to the DOE EOC as a liaison for both Benton and Franklin County
- ▶ 0940 - State EOC operational
- ▶ 0949 - Coordinated with DOE JIC to display "bullet #1" on the Hanford.gov website.

*There is an emergency on the Hanford Site. The emergency is specific to the Hanford Site and it is recommended that all residents or businesses within Benton, Franklin and Grant Counties monitor the situation. No emergency actions are being requested at this time.*



Tunnel #1 soil subsidence



Close up image of hole in Tunnel #1

# May 9, 2017 Hanford 200 East Upgrade - Site Area Emergency

- ▶ 1021 - received a "CRASH" call reclassifying to a Site Area Emergency
  - ▶ According to DOE consequence assessments - a partial collapse of PUREX tunnel 1 or tunnel 2 would result in a declaration of a site area emergency
  - ▶ Site Area Emergency will remain in effect until the tunnel collapse has been remediated.
  - ▶ Site Area Emergency is the second highest classification level of emergency
- ▶ 1208 - No indication of any radiological release - Hanford Site Employees north of the Wye Barricade and outside the 200 East area sent home as a precaution. Personnel in 200 east remain Sheltered in Place - employees from this area were released around 1335.
- ▶ DOH Field Monitoring Teams out checking background off site until 1800. Background readings only - no contamination.
- ▶ Continued to monitor into the night - Recovery plans were being made through the night as to how to fill the hole.

# May 10, 2017 Hanford 200 East Site Area Emergency

- ▶ 0937 - Crews began to filling the collapsed section with soil. Approximately 53 truckloads of soil - roughly 550 cubic yards.
  - ▶ Brought in new road bed material and built new road so workers & equipment operate on “clean” soil.
  - ▶ Used excavator to drop soil into the hole. Water truck with attached large mister blew water vapor over the hole to prevent possible spread of contamination.
- ▶ 2321 - Site Area Emergency is terminated.



**Tunnel #1 Recovery Operations**



PUREX Tunnel #1 today

# Lessons Learned

- ▶ To CodeRed or Not to CodeRed
  - ▶ BCEM and FCEM discuss using the CodeRed system to provide information to citizens. After consideration it was decided because there was no public action necessary that use of CodeRed may only cause more concern amongst the public than it would help.
  - ▶ We later heard from a couple of concerned citizens wanting to know “why we did not use CodeRed”
- ▶ Disaster Medical Control Center notification
  - ▶ Communication with Kadlec Medical Center and rumor control.
- ▶ This is NOT a drill, this is a REAL emergency!
  - ▶ People who respond are accustomed to be being notified and told “this is just a drill”

# Lessons Learned

- ▶ Use of social media was critical -
  - ▶ Hanford.gov website normally receives 30-70K views/day; between 1.5 and 2 million views/day during incident from 60 countries. Be the first and they will come.
  - ▶ DOE did a Facebook live press conference - great concept, but quality of video and audio a bit poor
  - ▶ Lots of misinformation on social media from unreliable sources. Needs to be monitored.
  - ▶ State EOC retweeted Hanford Tweets to reinforce messages from another reliable source. Also, to reach others that may have not been following the incident
- ▶ Local Media was invited/allowed into the local EOC/ECC for this event
  - ▶ Good news coverage for EM programs and local response agencies
  - ▶ No formal security was in place at Benton EOC - reporter walked in un-escorted

# Lessons Learned

- ▶ Situational Awareness
  - ▶ Initial need for information (what's going on?) was challenging.
  - ▶ Took time to get good solid info. Pretty much the norm during any emergency.
- ▶ Local Media was invited/allowed into the local EOC/ECC for this event
  - ▶ Good news coverage for EM programs and local response agencies
  - ▶ No formal security was in place at Benton EOC - reporter walked in un-escorted
- ▶ Better logging of information.
  - ▶ People not so rushed after initial activation. Spent more time filling out logs and sharing information.

# Questions?

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