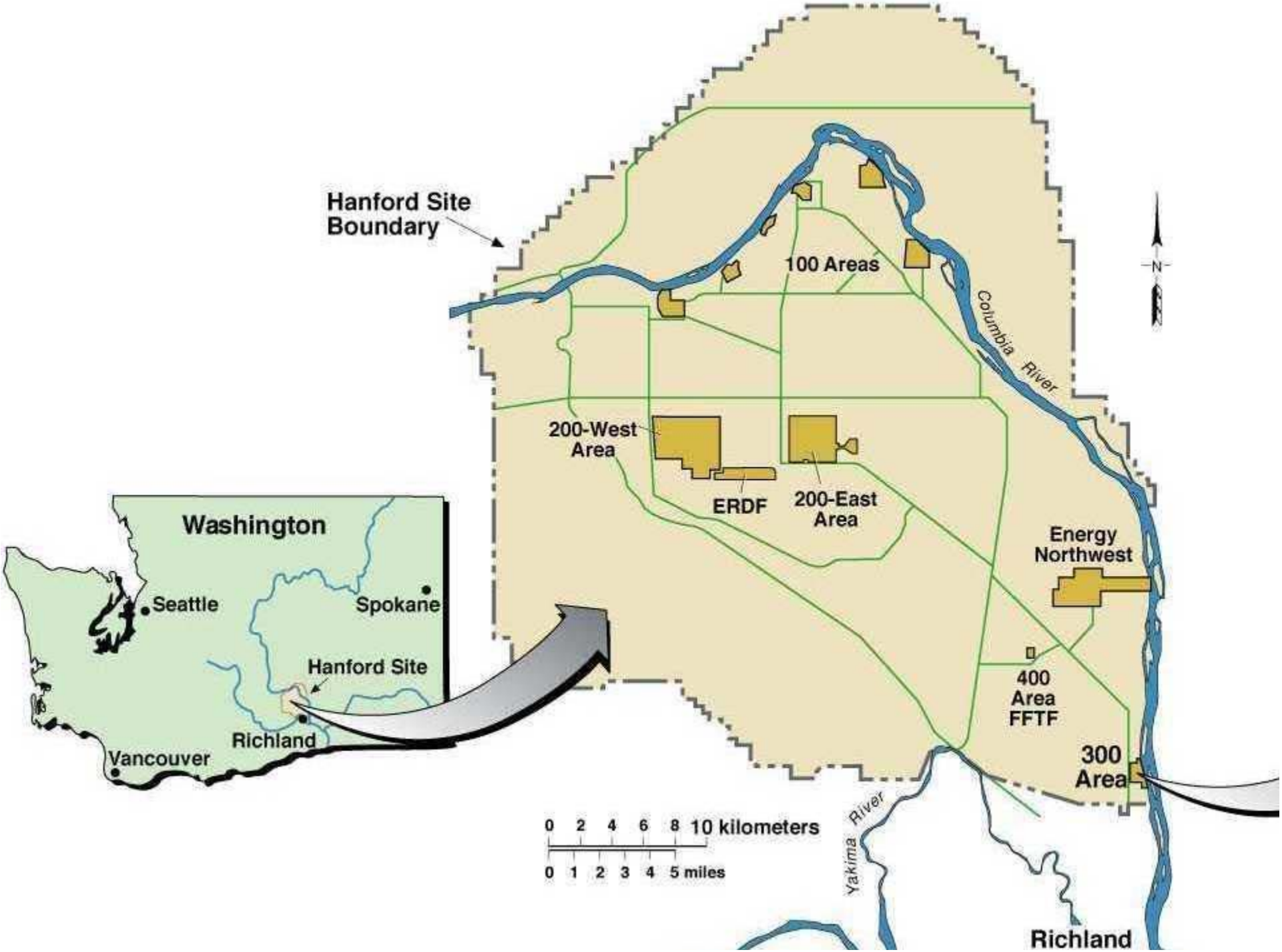
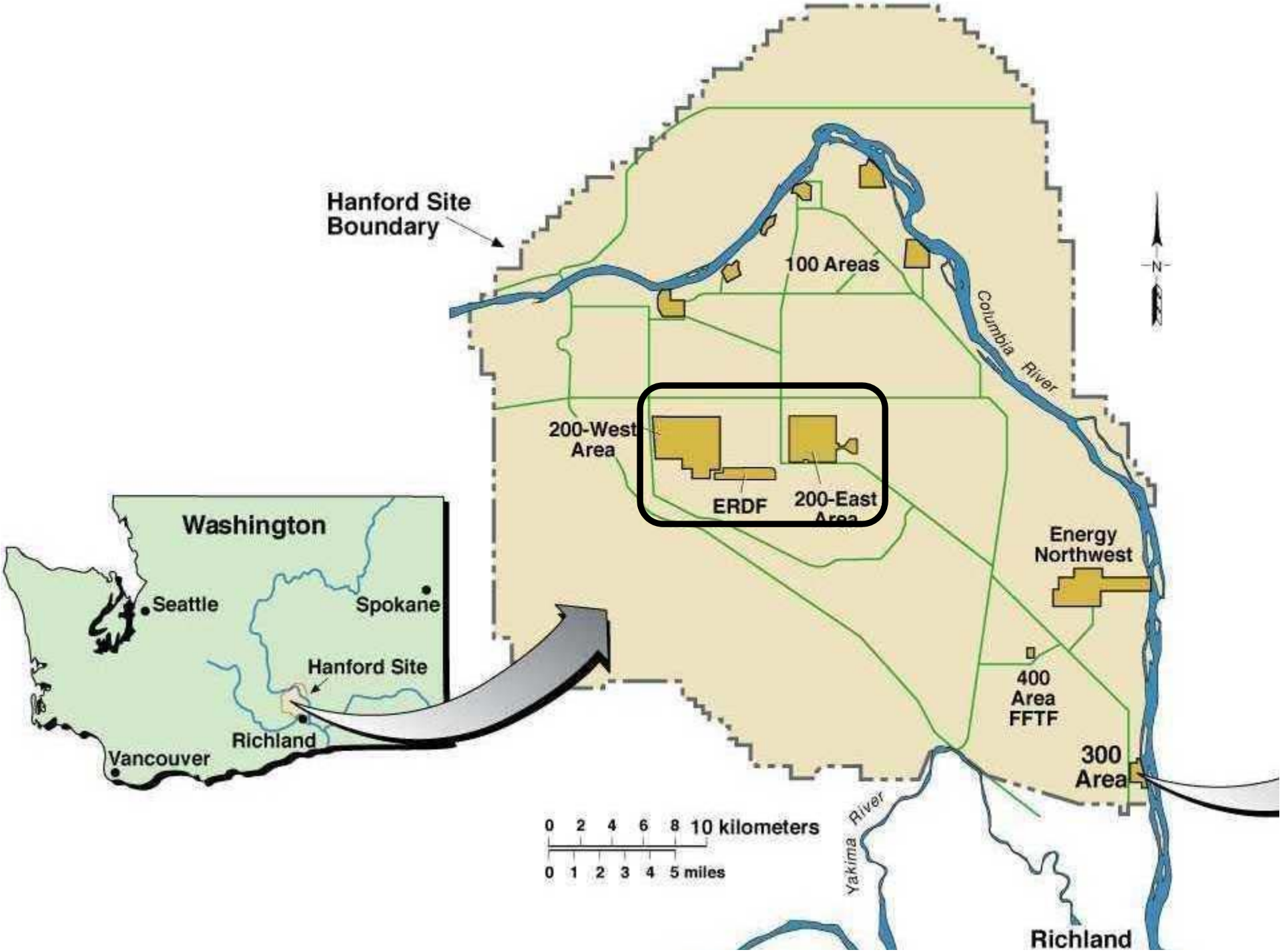
# Overview of Hanford's 200 Areas

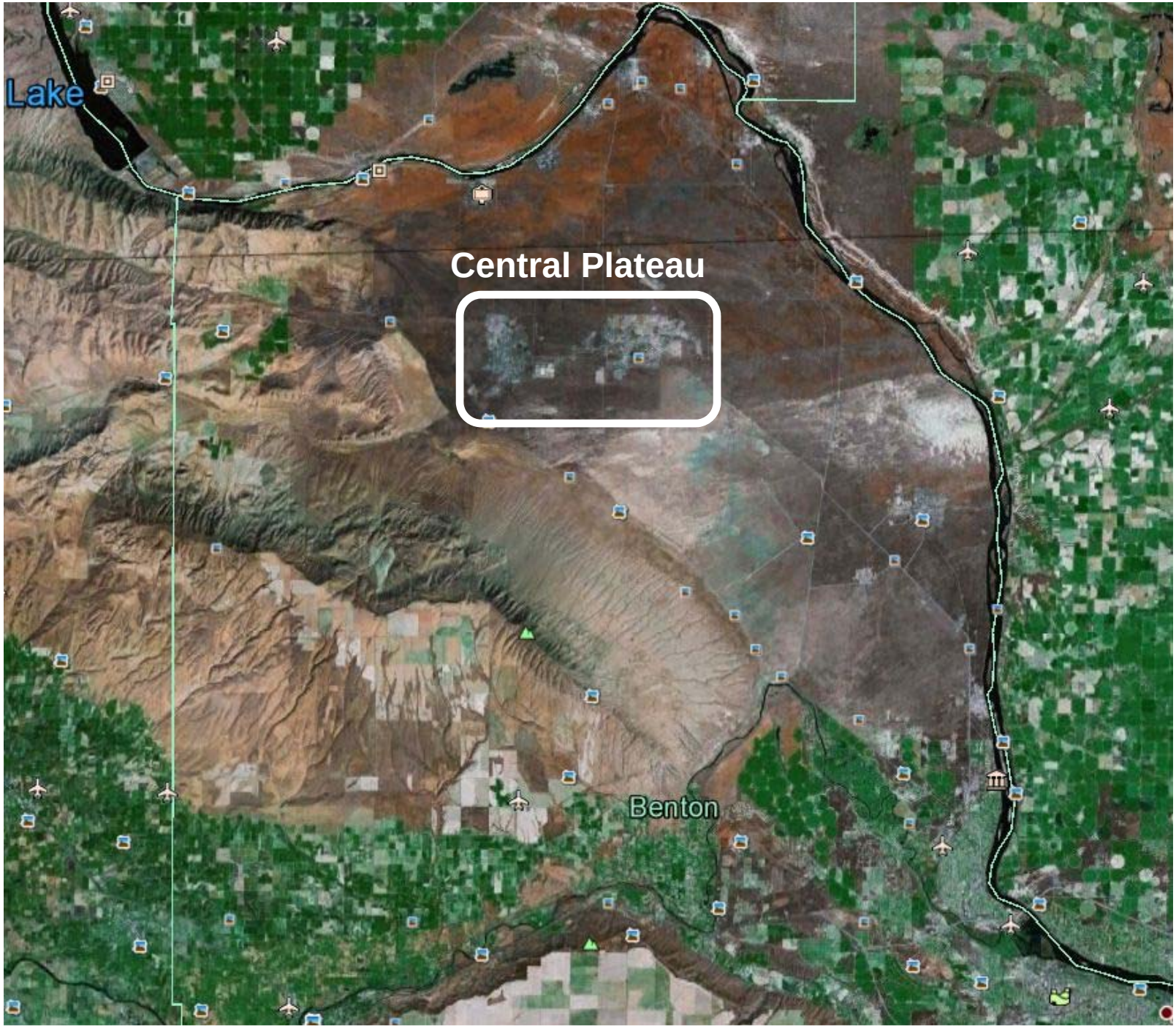

**Ken Niles, Assistant Director**

**Oregon Department of Energy**


OREGON DEPARTMENT OF ENERGY


Hanford Site Boundary
100 Areas
Columbia River
N
200-West Area
ERDF
200-East Area
Energy Northwest
400 Area FFTF
300 Area
Yakima River
Richland
0 2 4 6 8 10 kilometers
0 1 2 3 4 5 miles
Washington
Seattle
Spokane
Hanford Site
Richland
Vancouver

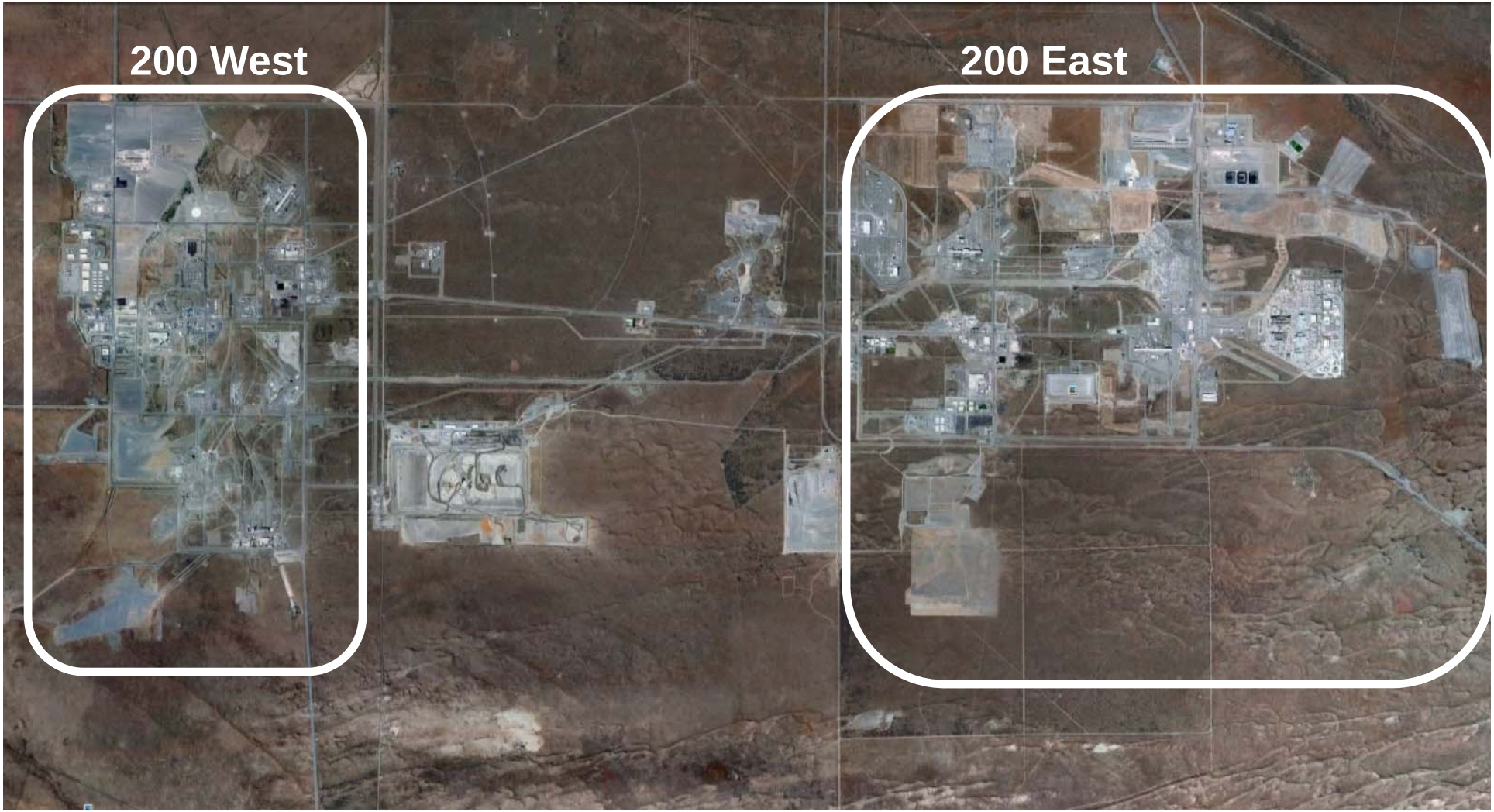

Hanford Site Boundary
100 Areas
Columbia River
N
200-West Area
ERDF
200-East Area
Energy Northwest
400 Area FFTF
300 Area
Yakima River
Richland
0 2 4 6 8 10 kilometers
0 1 2 3 4 5 miles
Washington
Seattle
Spokane
Hanford Site
Richland
Vancouver


Lake
Central Plateau
Benton

# Hanford Central Plateau

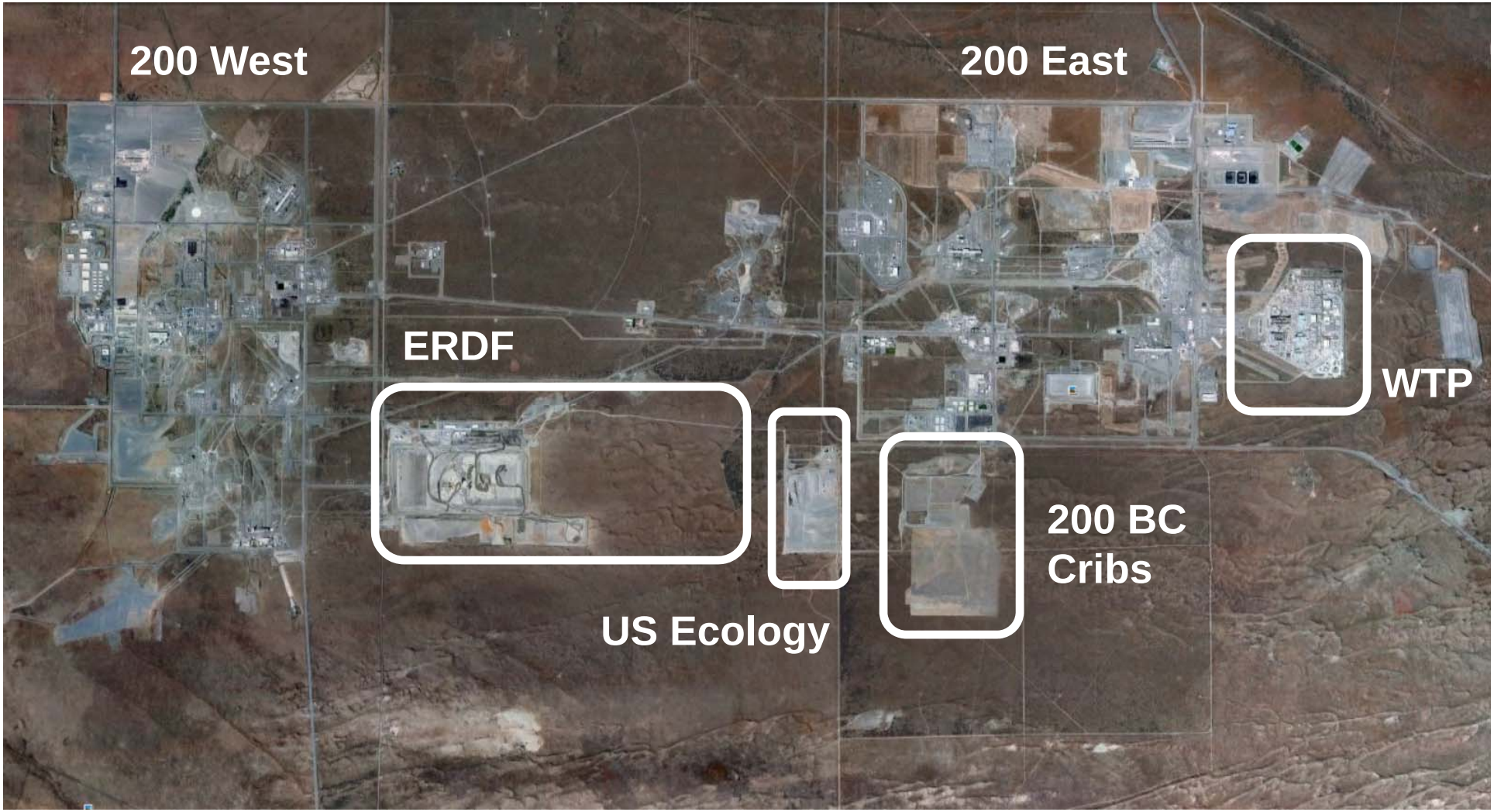
OREGON DEPARTMENT OF ENERGY

# 200 West & East Areas




OREGON DEPARTMENT OF ENERGY

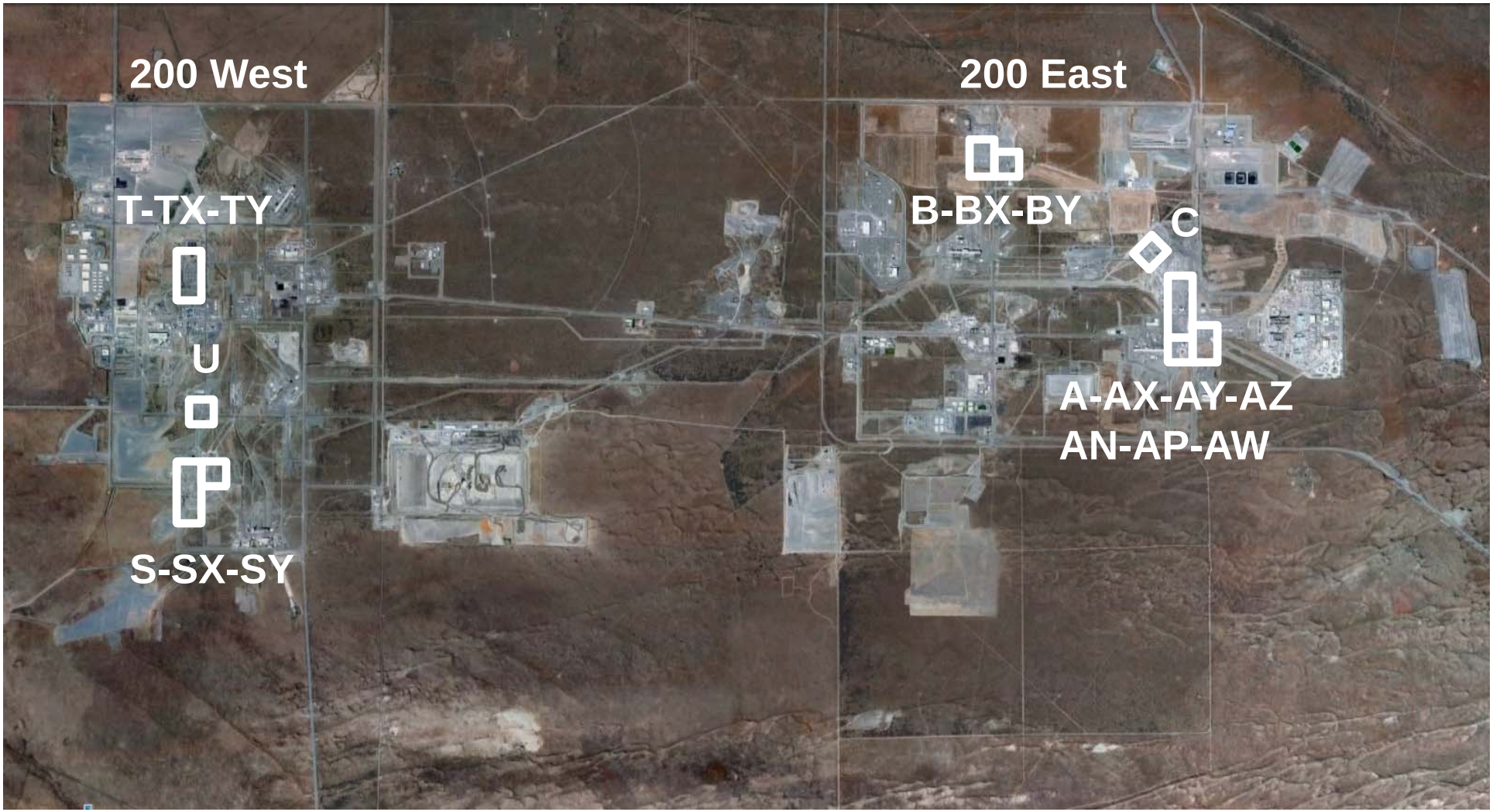
# 200 West & East Areas




"Adjacent" Areas

OREGON DEPARTMENT OF ENERGY

# Tank Farms




18 Tank Farms in 5 Waste Management Areas

OREGON DEPARTMENT OF ENERGY

# Tanks

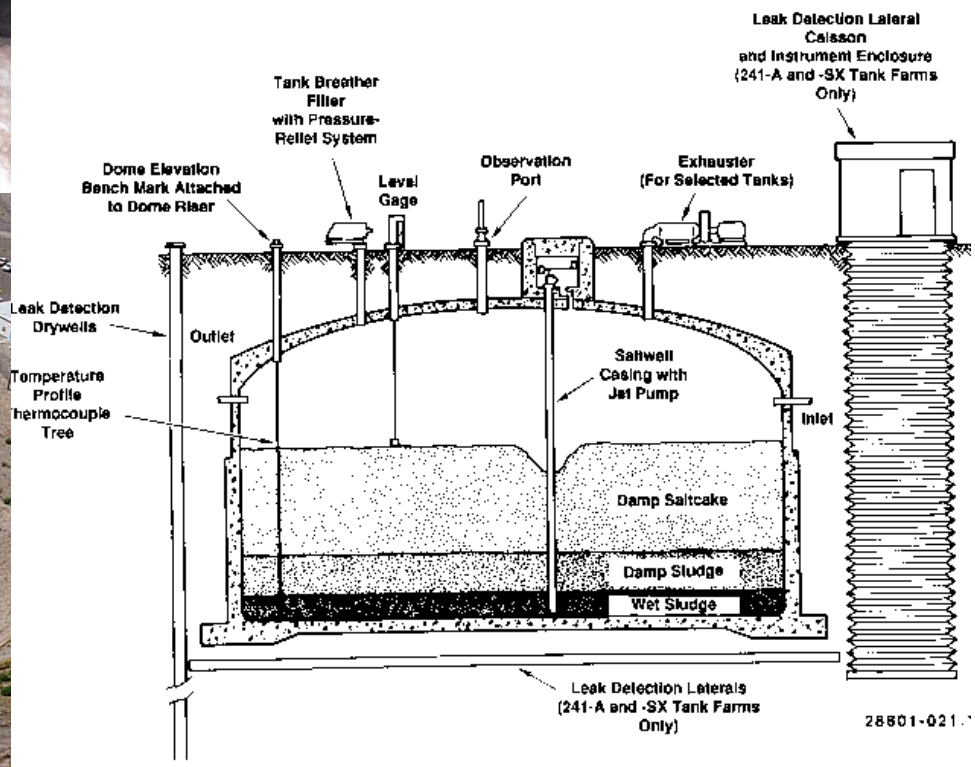
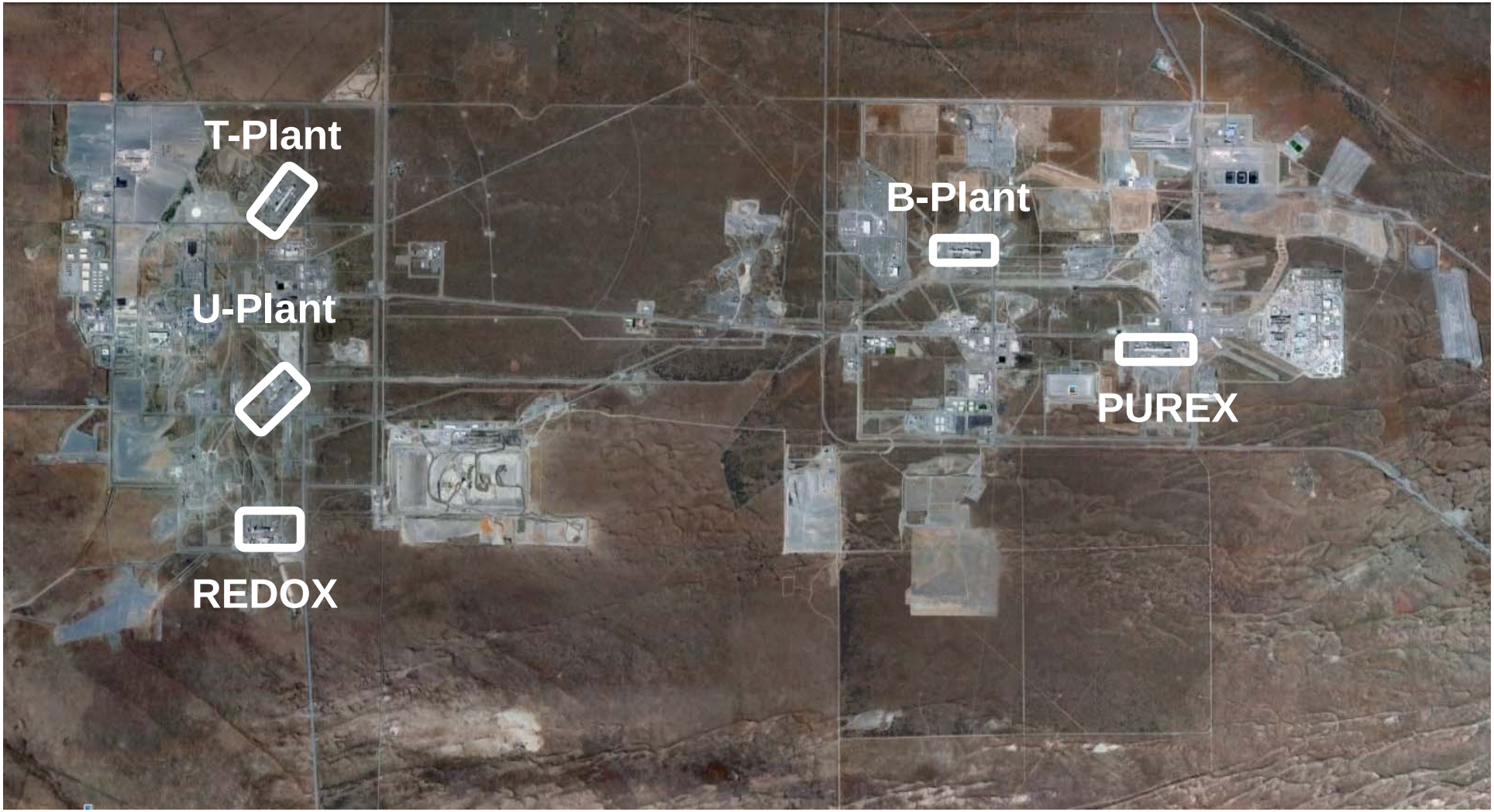


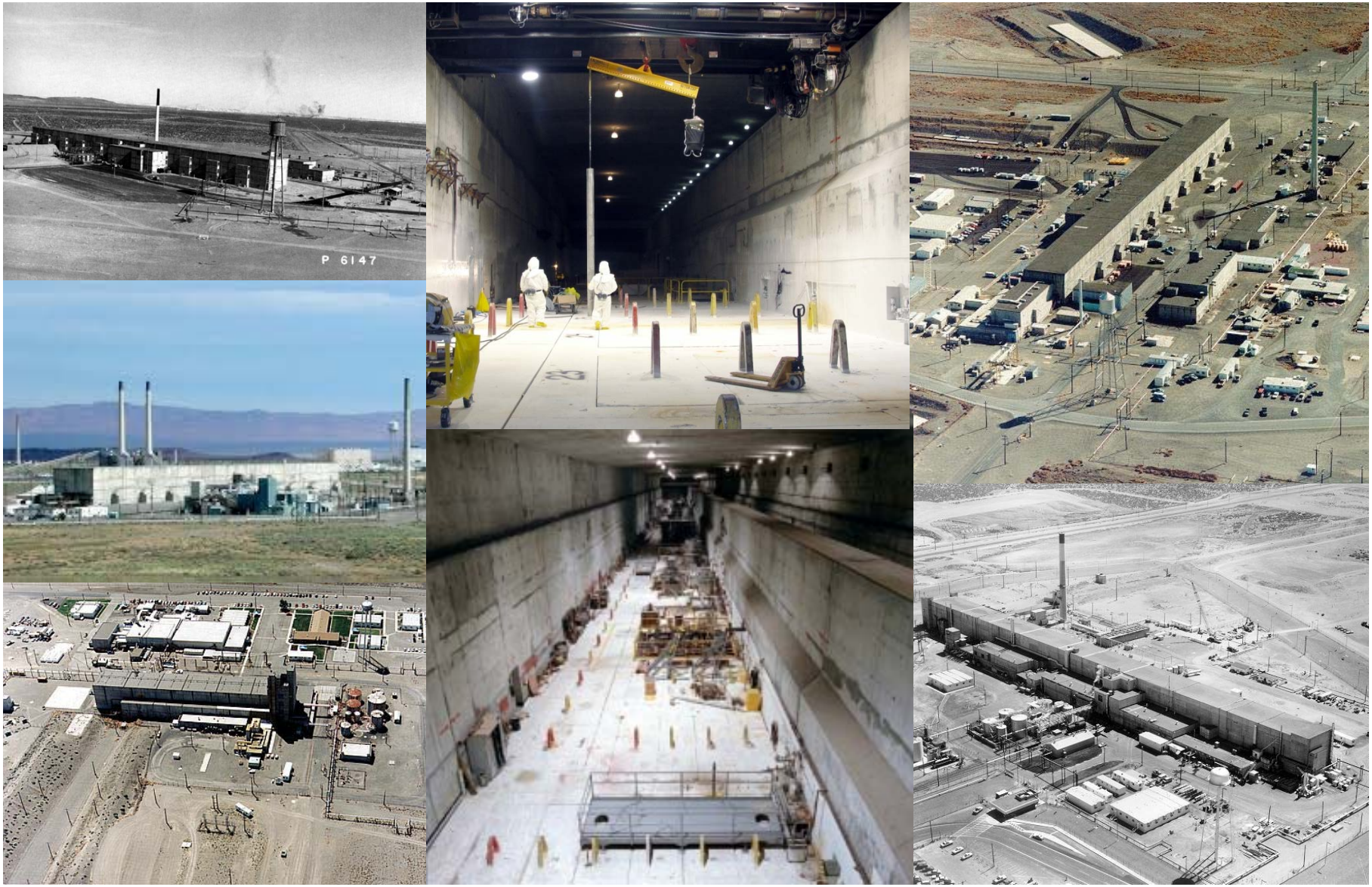

Figure A-8. Typical Single-Shell Tank

# Canyons

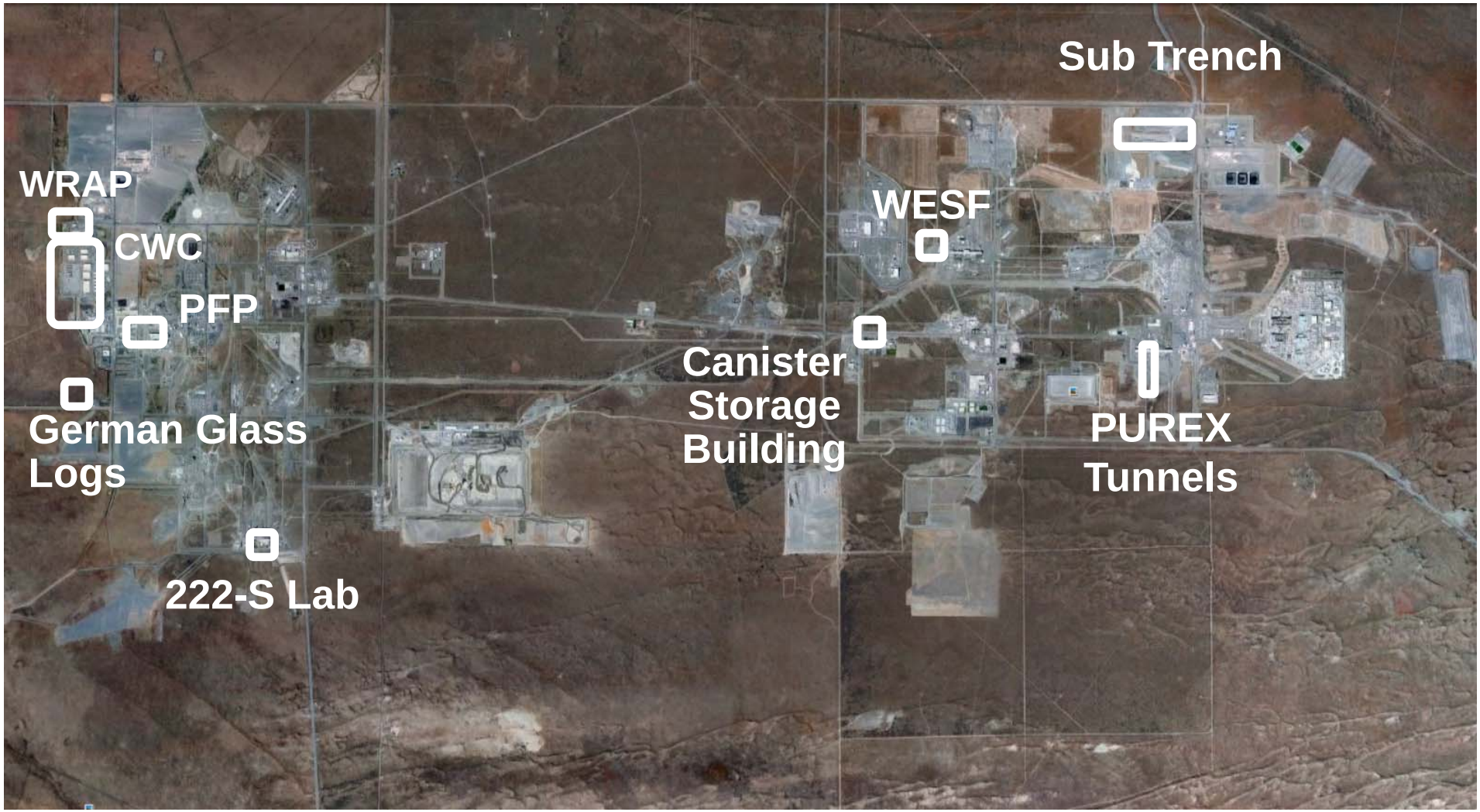



OREGON DEPARTMENT OF ENERGY

# Canyons



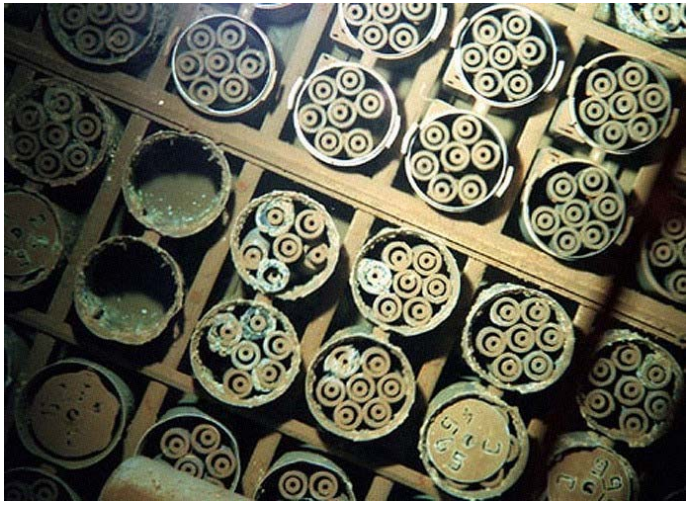
# Other Facilities/Waste Streams




OREGON DEPARTMENT OF ENERGY

# Plutonium Finishing Plant

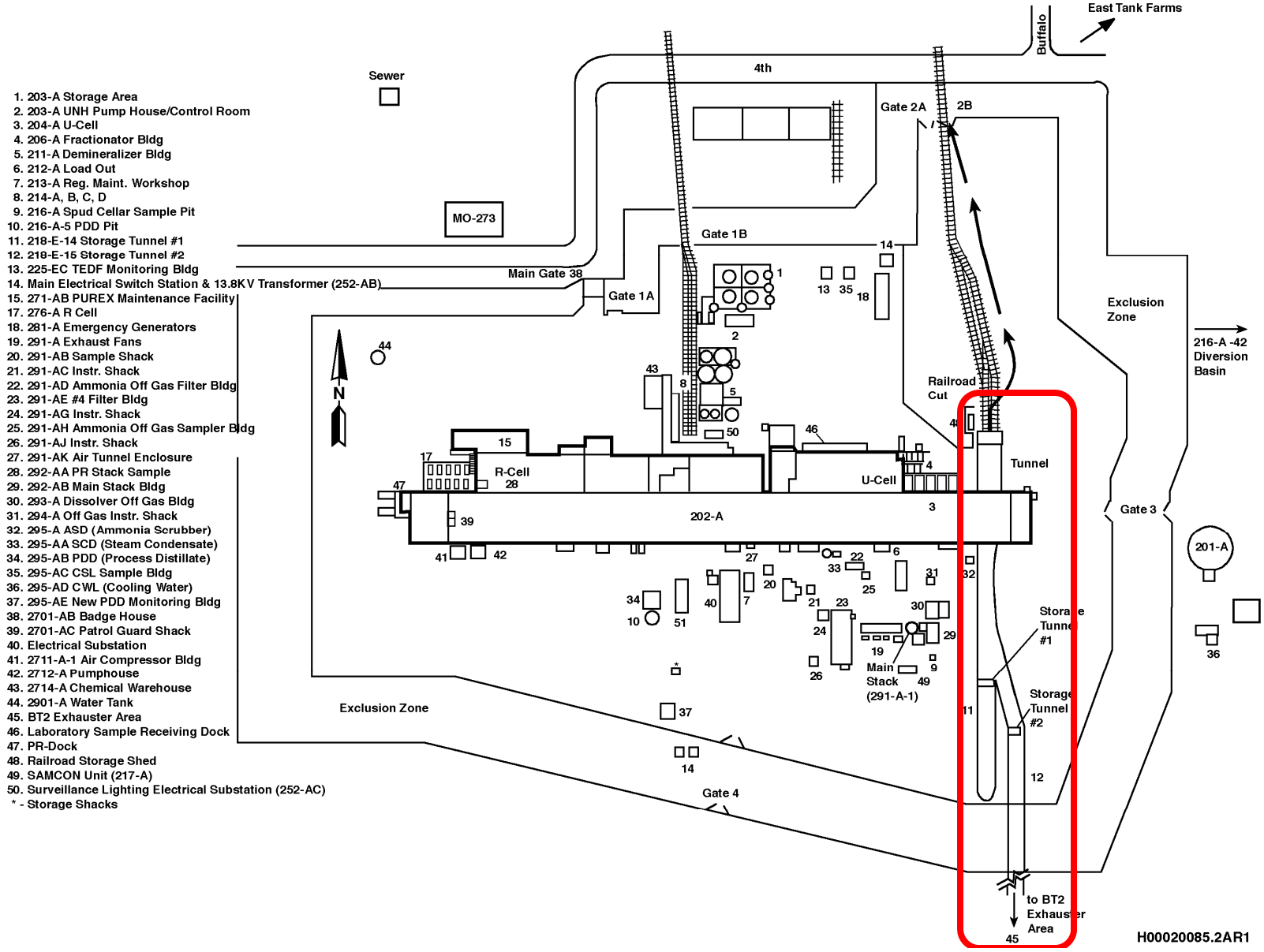
# Canister Storage Building



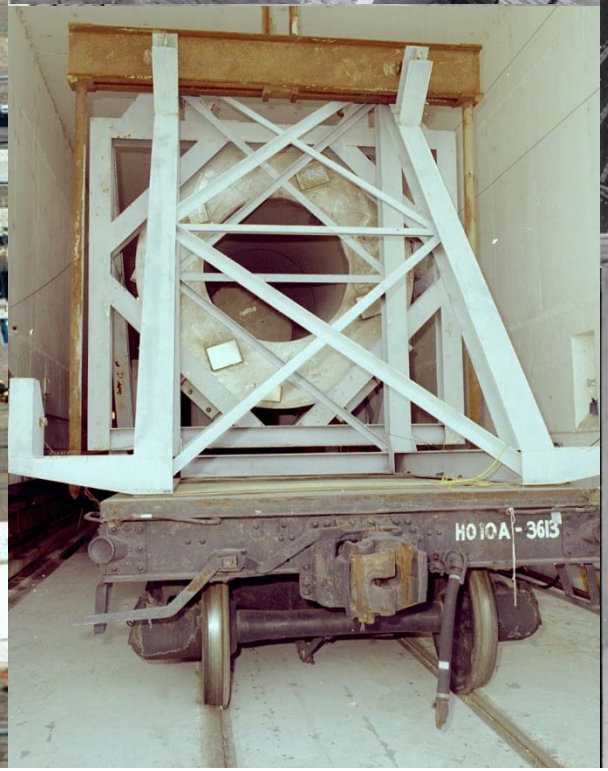
OREGON DEPARTMENT OF ENERGY

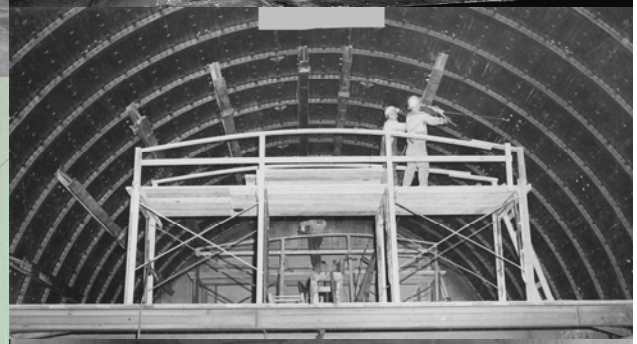
# Trench 94

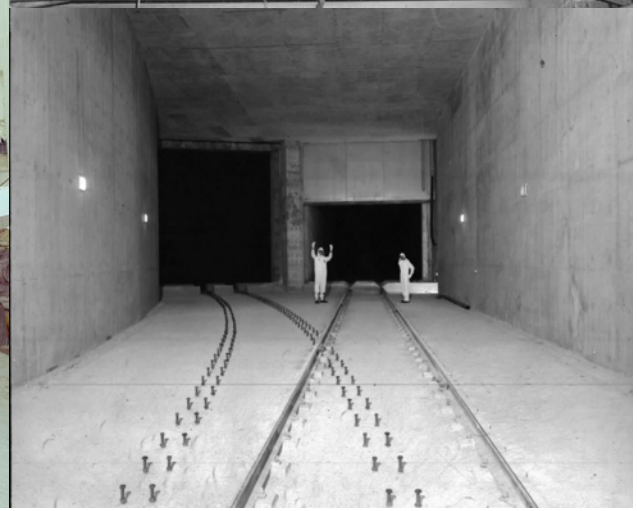
# PUREX Tunnels



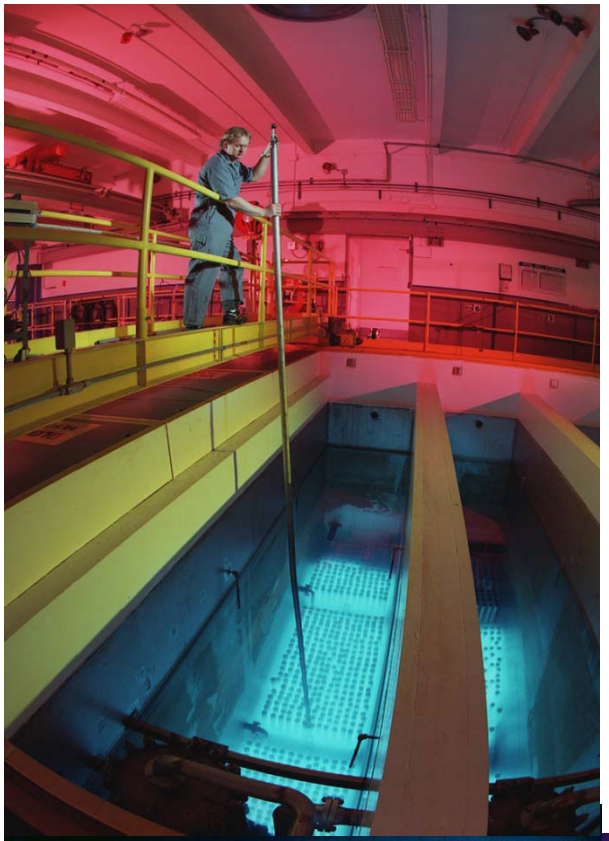
# PUREX Tunnels

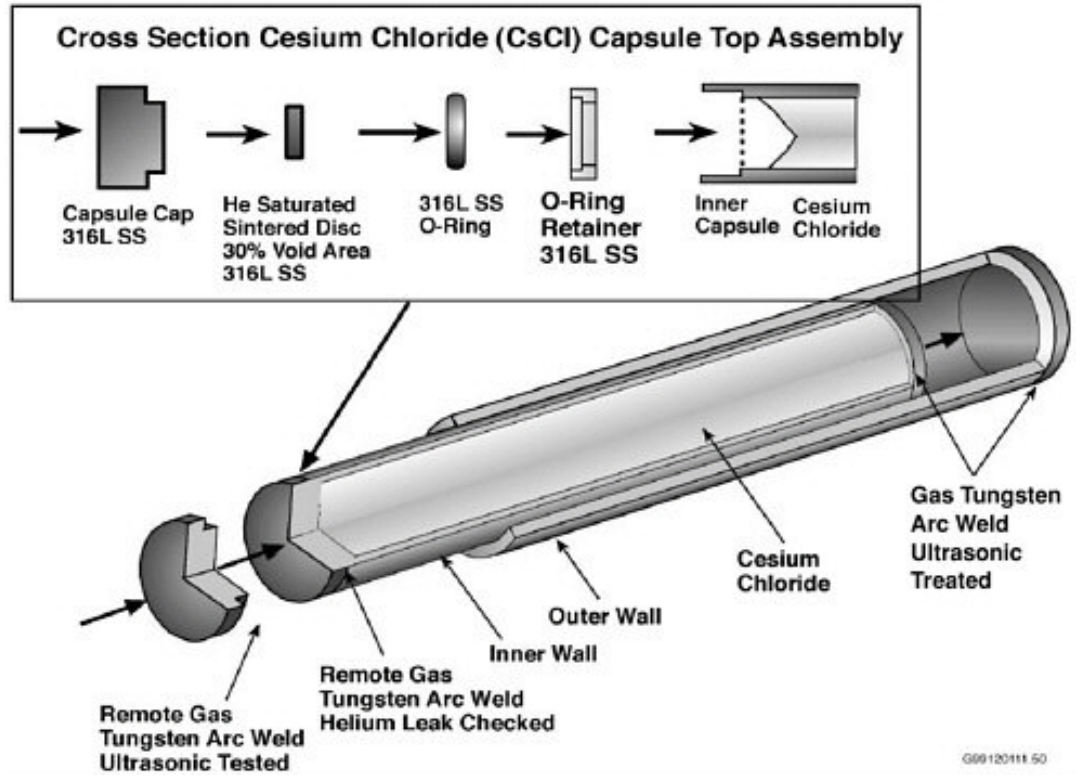


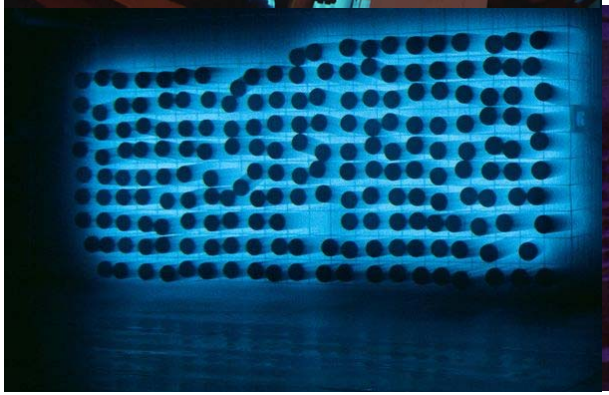


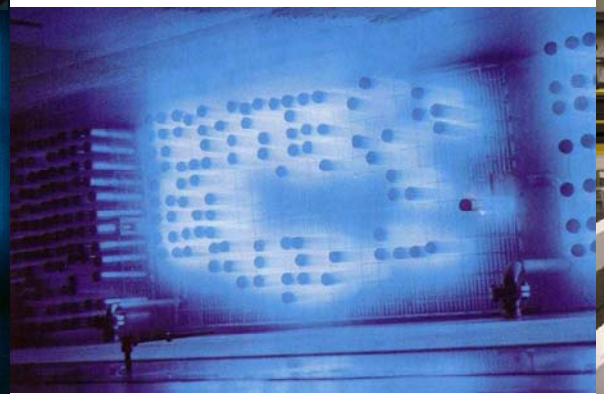


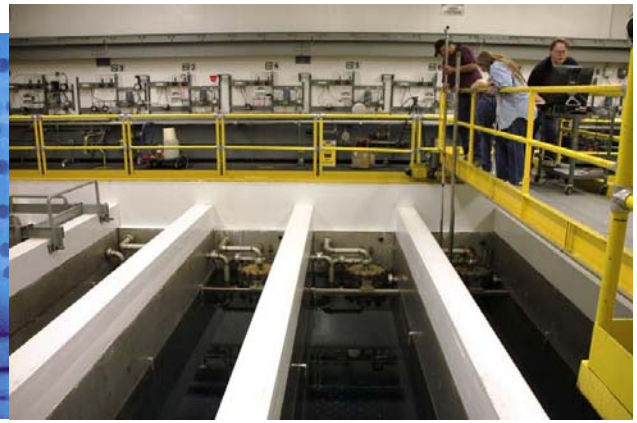
# Waste Encapsulation Storage Facility









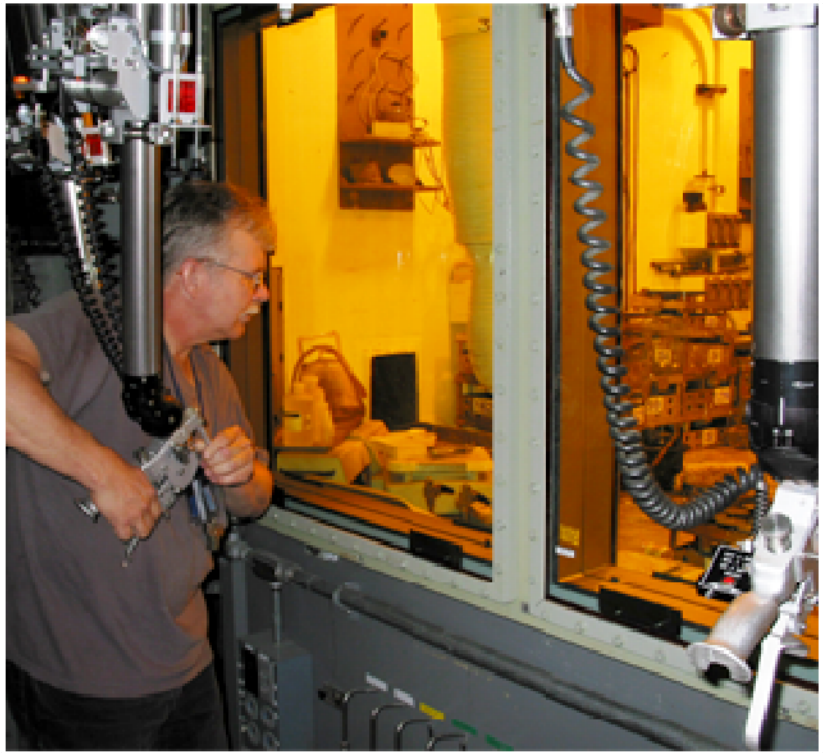
# Central Waste Complex

OREGON DEPARTMENT OF ENERGY

# Waste Receiving and Processing

OREGON DEPARTMENT OF ENERGY

# 222-S Lab



OREGON DEPARTMENT OF ENERGY

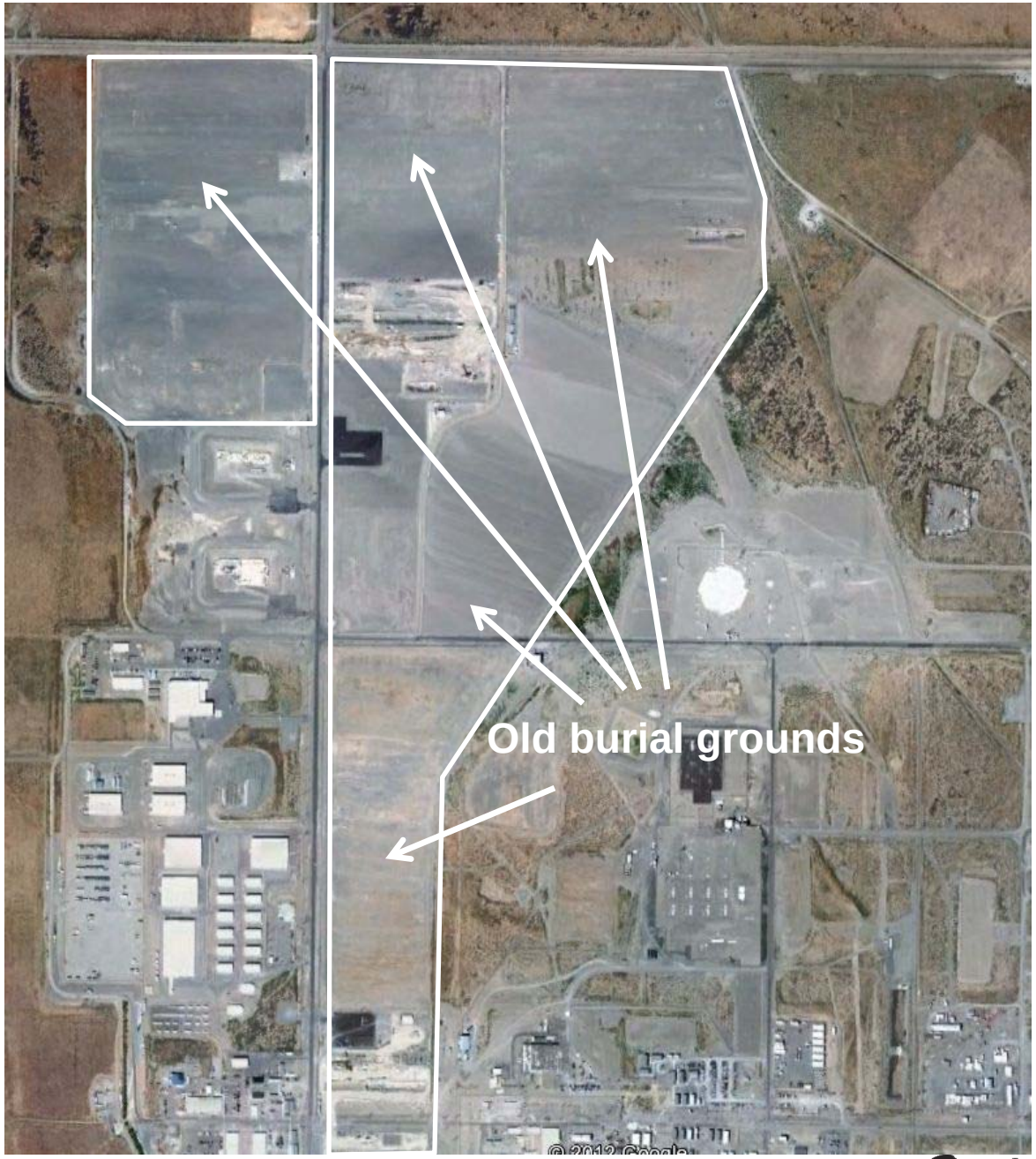
# German Glass Logs

OREGON DEPARTMENT OF ENERGY

# DOE Burial Grounds

OREGON DEPARTMENT OF ENERGY

# 200 West Area

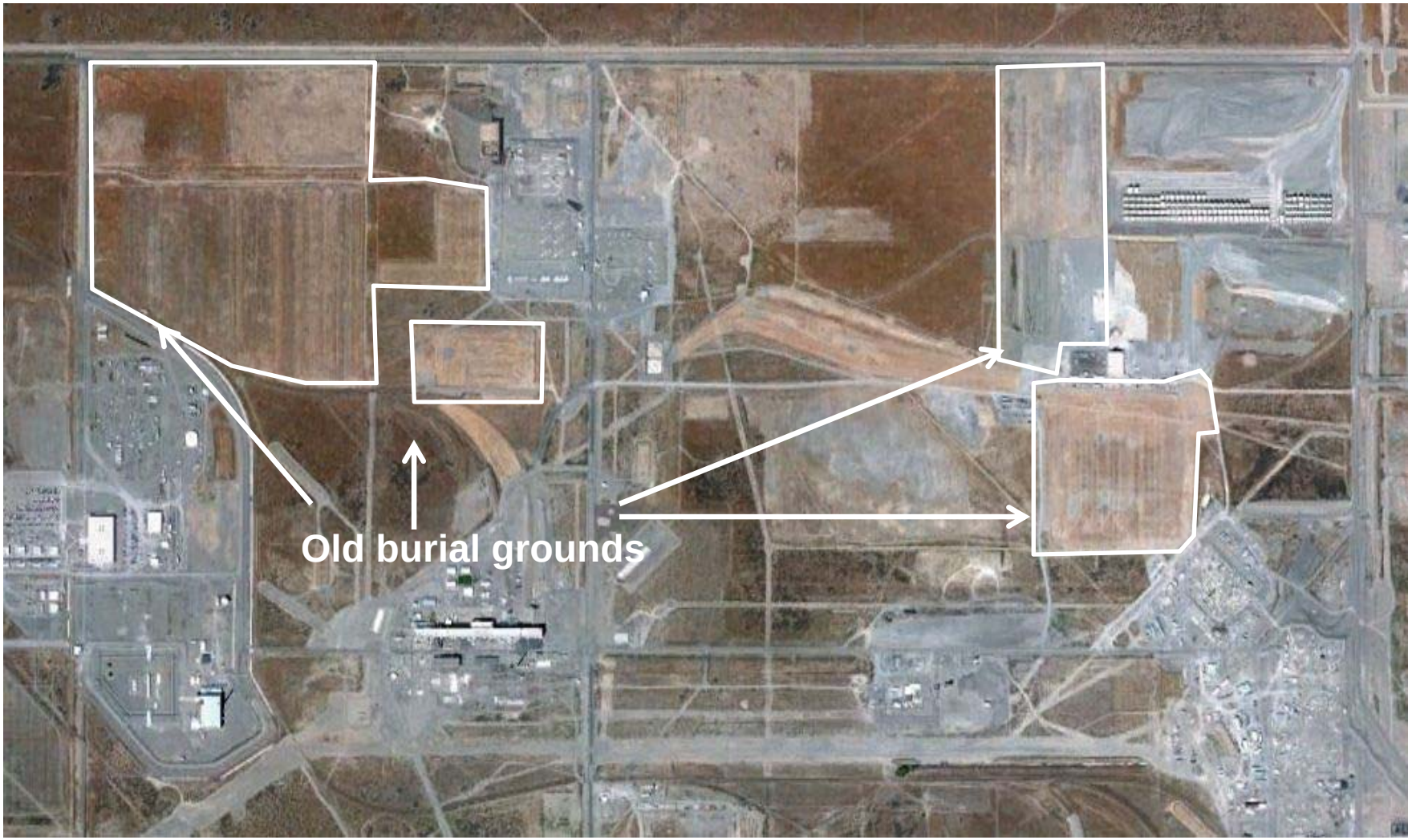



OREGON DEPARTMENT OF ENERGY

# 200 West Burial Grounds

Looking South toward Rattlesnake Mountain

OREGON DEPARTMENT OF ENERGY




# 200 East Area

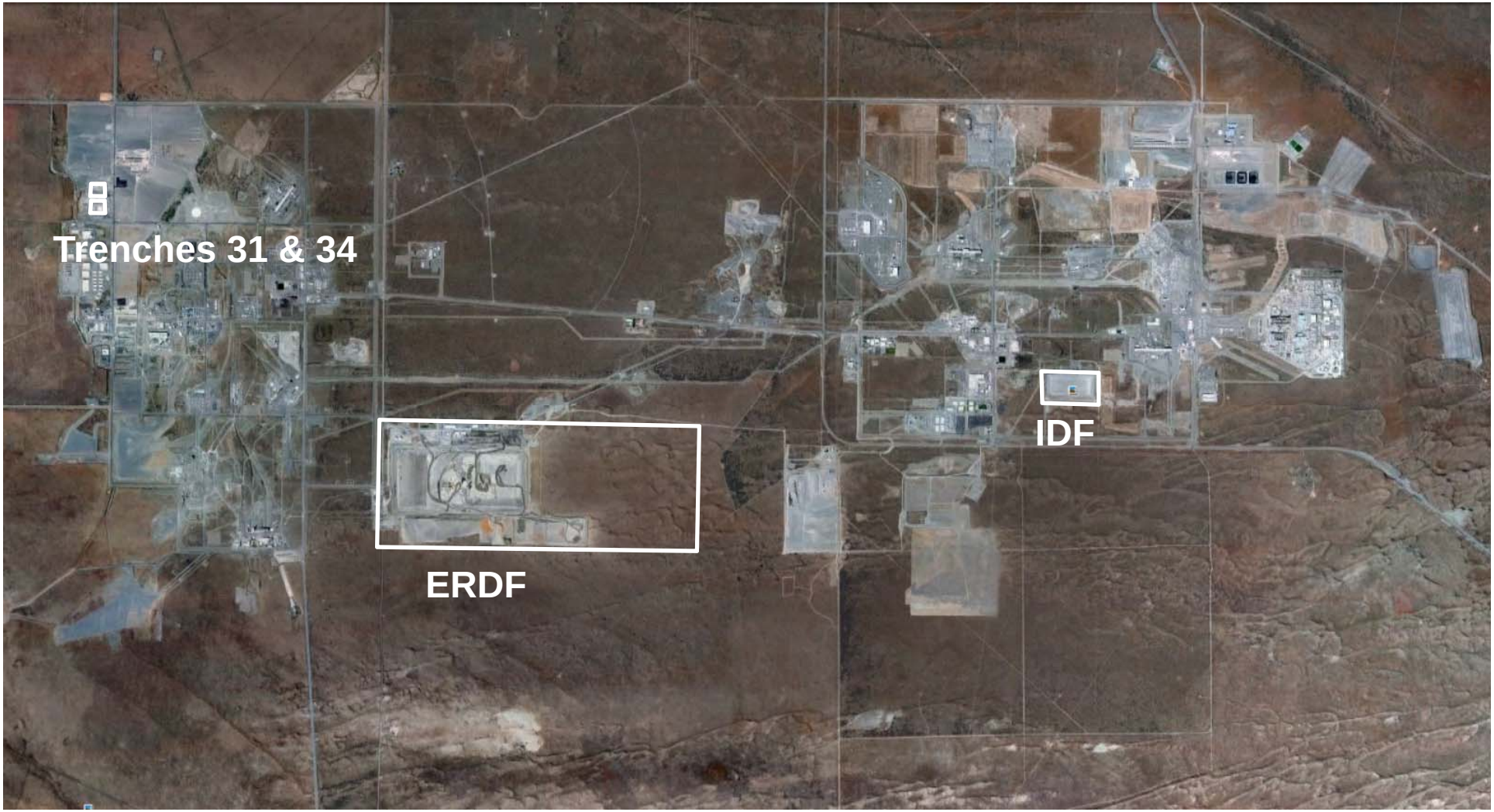
OREGON DEPARTMENT OF ENERGY

# Burial Grounds

**361 trenches**
**~ 24 feet deep, 37-60 feet wide, 200 feet long**

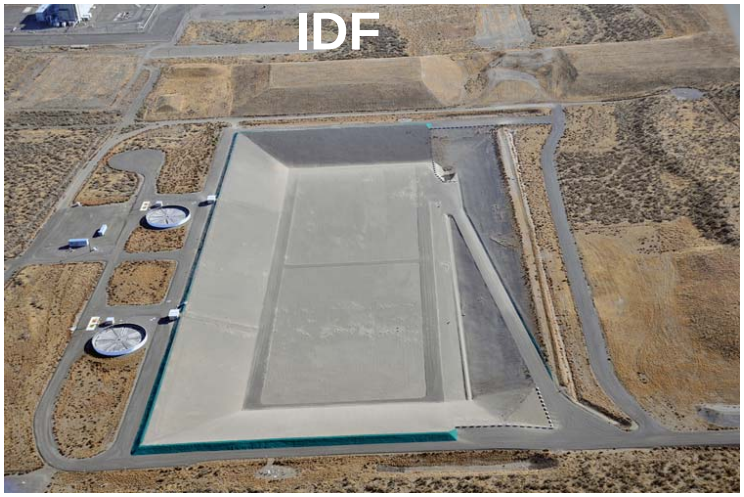
**43.5 miles end to end contain 15 million cubic feet of waste**

# Lined Disposal Facilities




OREGON DEPARTMENT OF ENERGY

# Lined Disposal Facilities



OREGON DEPARTMENT OF ENERGY

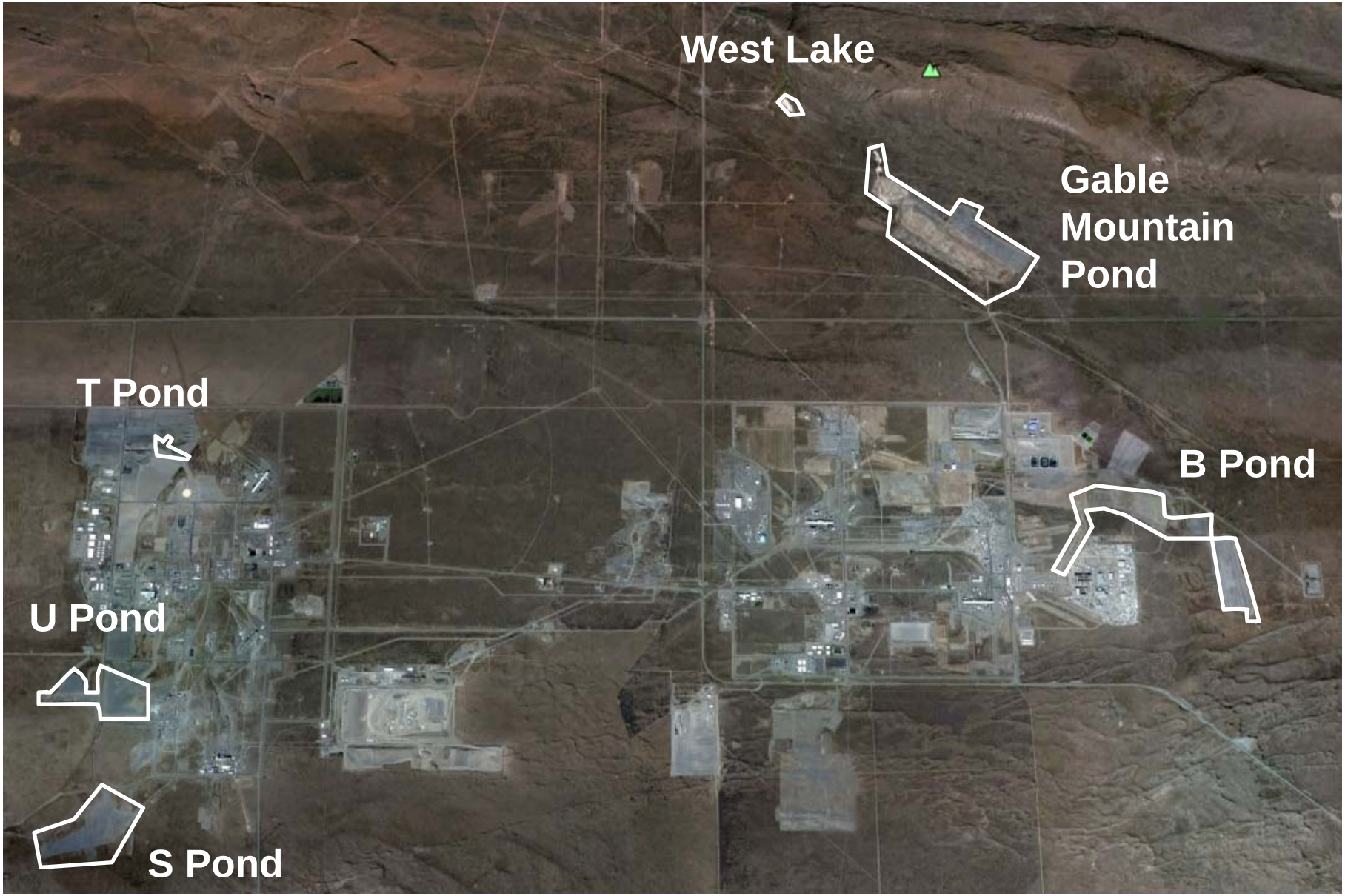
# Major Unlined Trenches/Cribs

OREGON DEPARTMENT OF ENERGY

# Major Unlined Trenches/Cribs

OREGON DEPARTMENT OF ENERGY

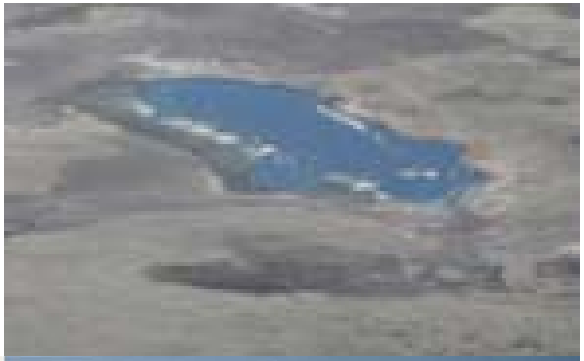
# Ponds



# Ponds

←T Pond

West Lake →



Gable Mountain Pond →

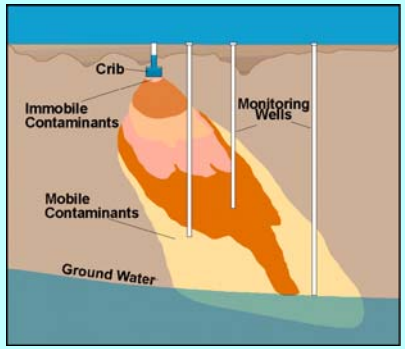
← U Pond

← S Pond

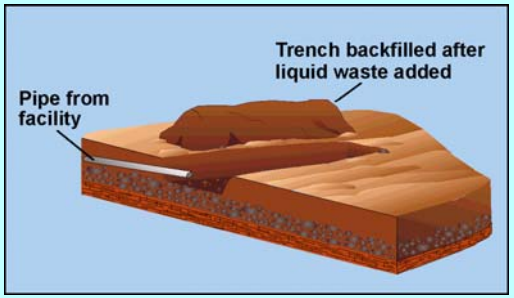
B Pond →

# Methods of Liquid Releases to the Ground

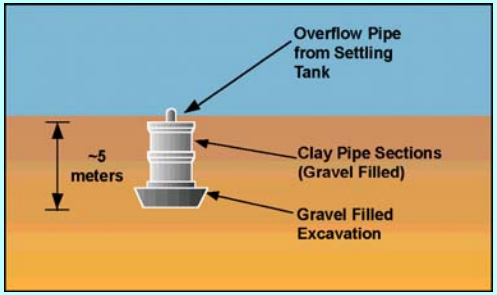
**Cribs**
**1944-1990s**



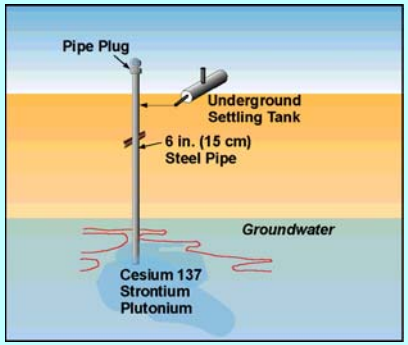

**Specific Retention Trenches 1944-1973**



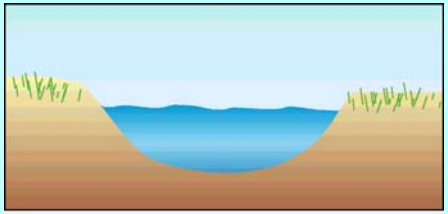

**French Drains**
**1944-1980s**




**Reverse Wells**
**1945 - 1955**
**(one to 1980)**

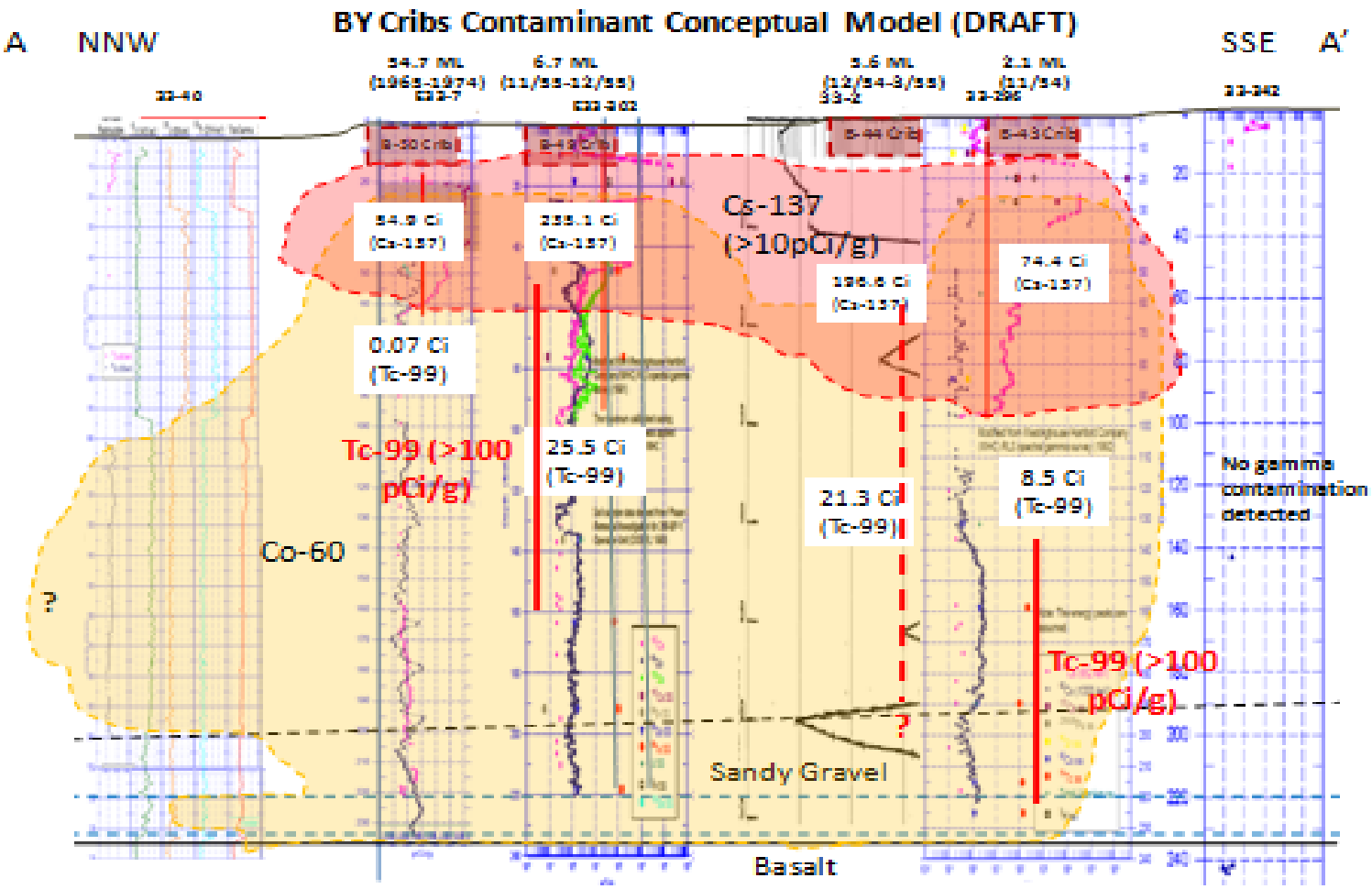



**Ponds**
**1944-1990s**



OREGON DEPARTMENT OF ENERGY

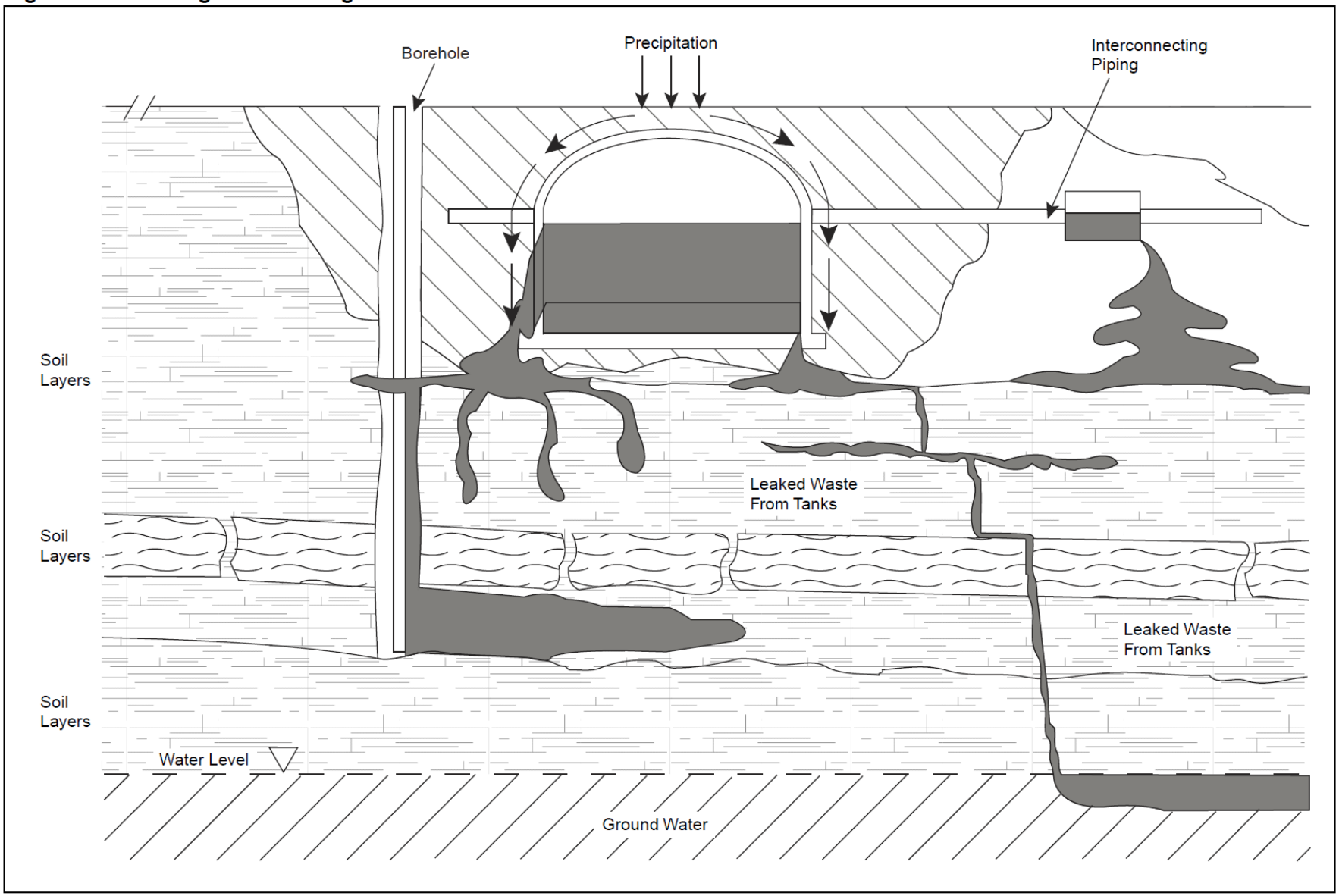
# Vadose Zone Contamination: Category III (Example: BY Crib, 200-DV-1 OU)




Courtesy: Dib Goswami, Washington Department of Ecology

OREGON DEPARTMENT OF ENERGY

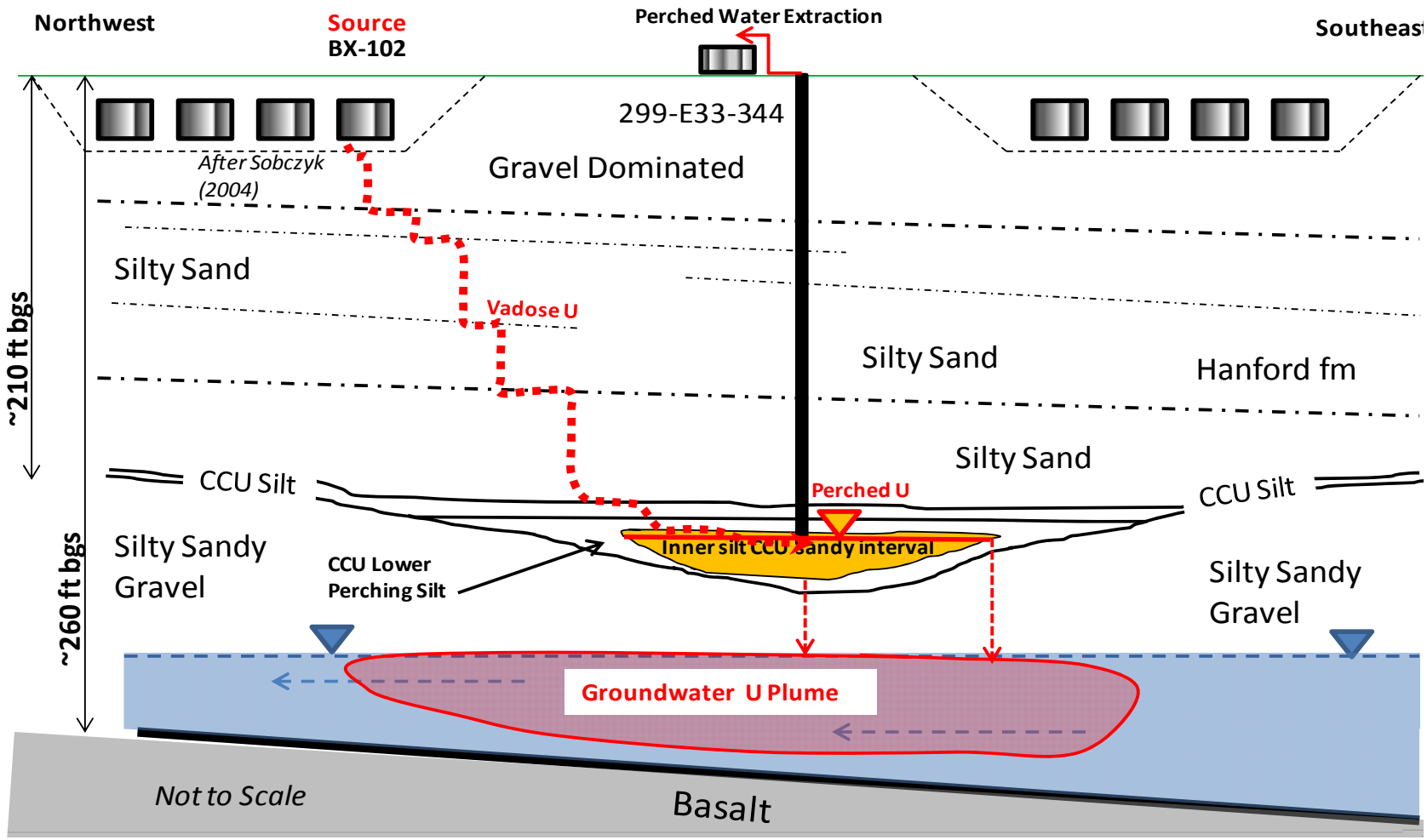
**Figure 2: Waste Migration Through the Vadose Zone at the Hanford Site**




Source: Based on an illustration from DOE.

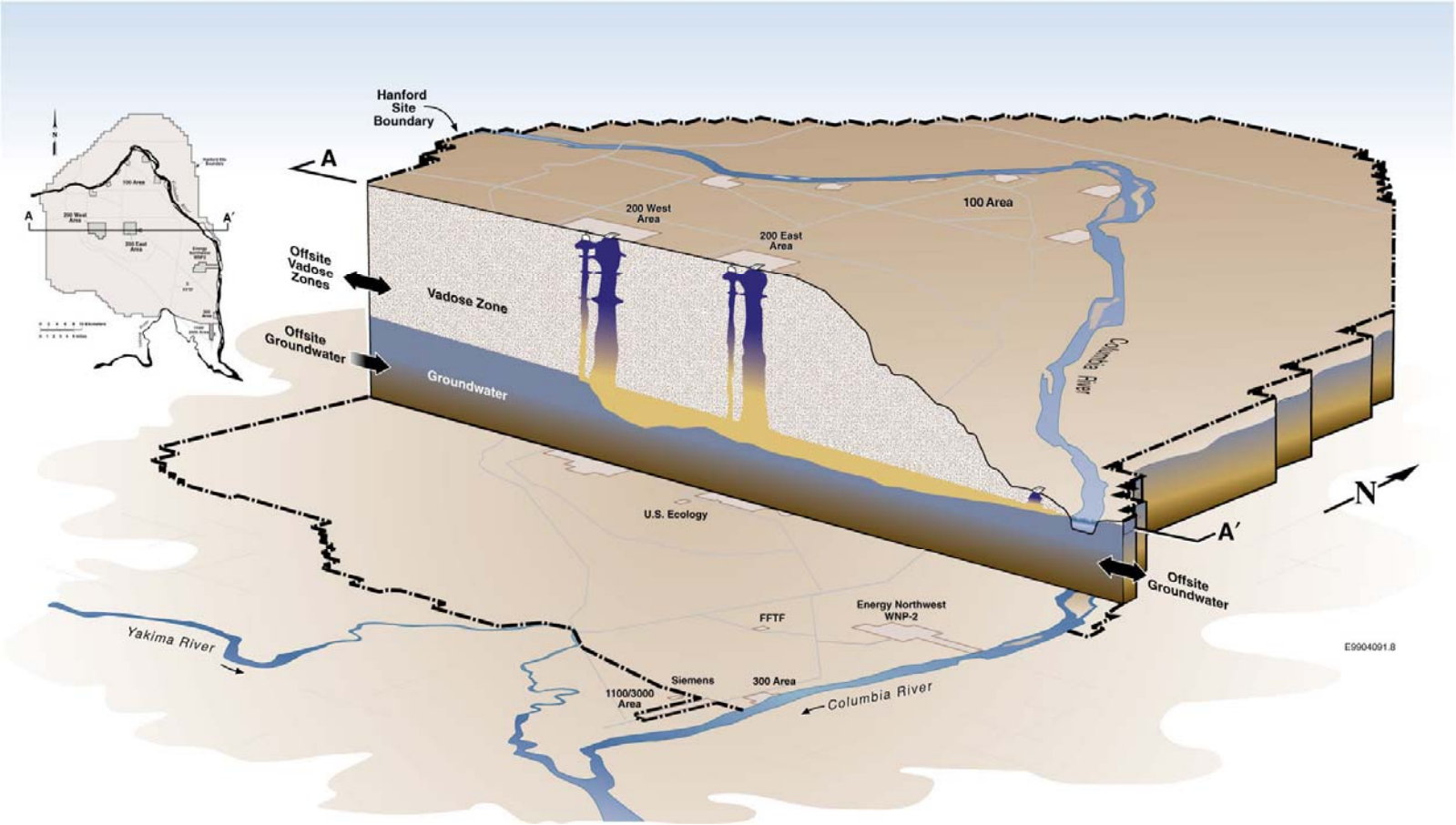
OREGON DEPARTMENT OF ENERGY

# Deep Vadose Zone Contamination




Courtesy: Dib Goswami, Washington Department of Ecology

OREGON DEPARTMENT OF ENERGY




# Groundwater and Soil Contamination

OREGON DEPARTMENT OF ENERGY

# Plumes from tank leaks

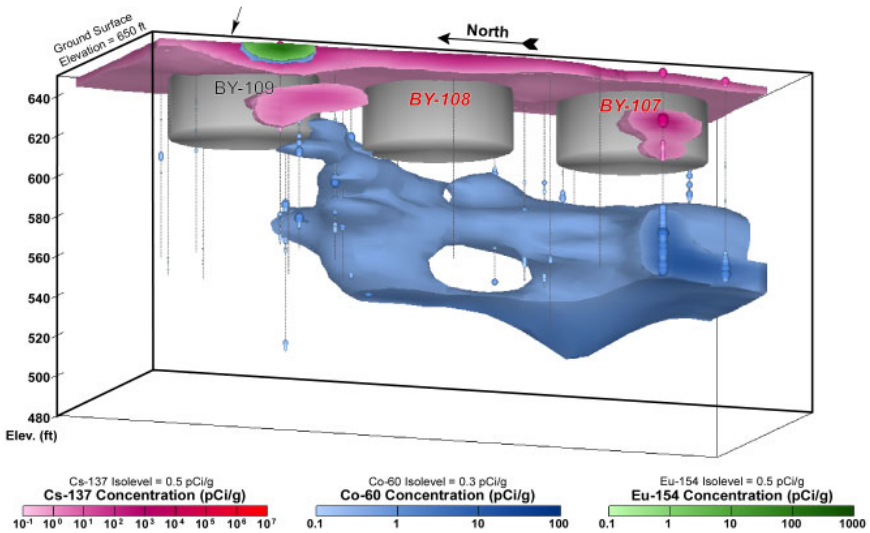



Figure E-23. BY Tank Farm Visualization

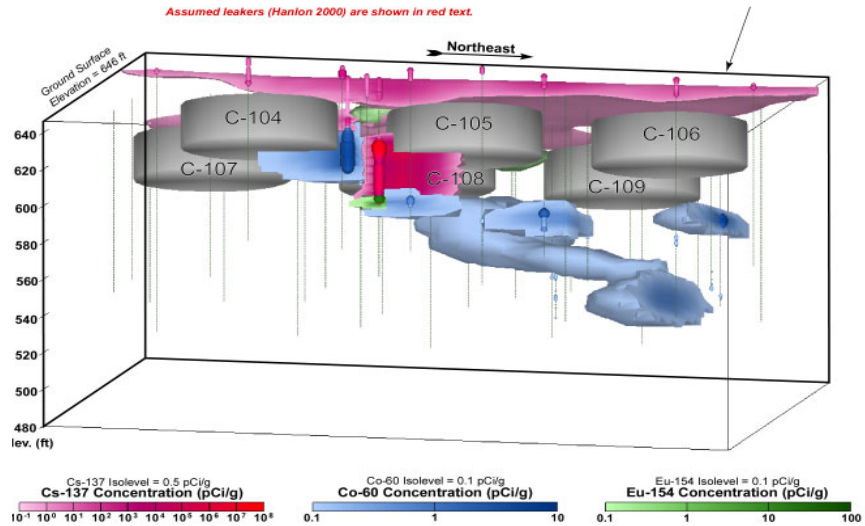
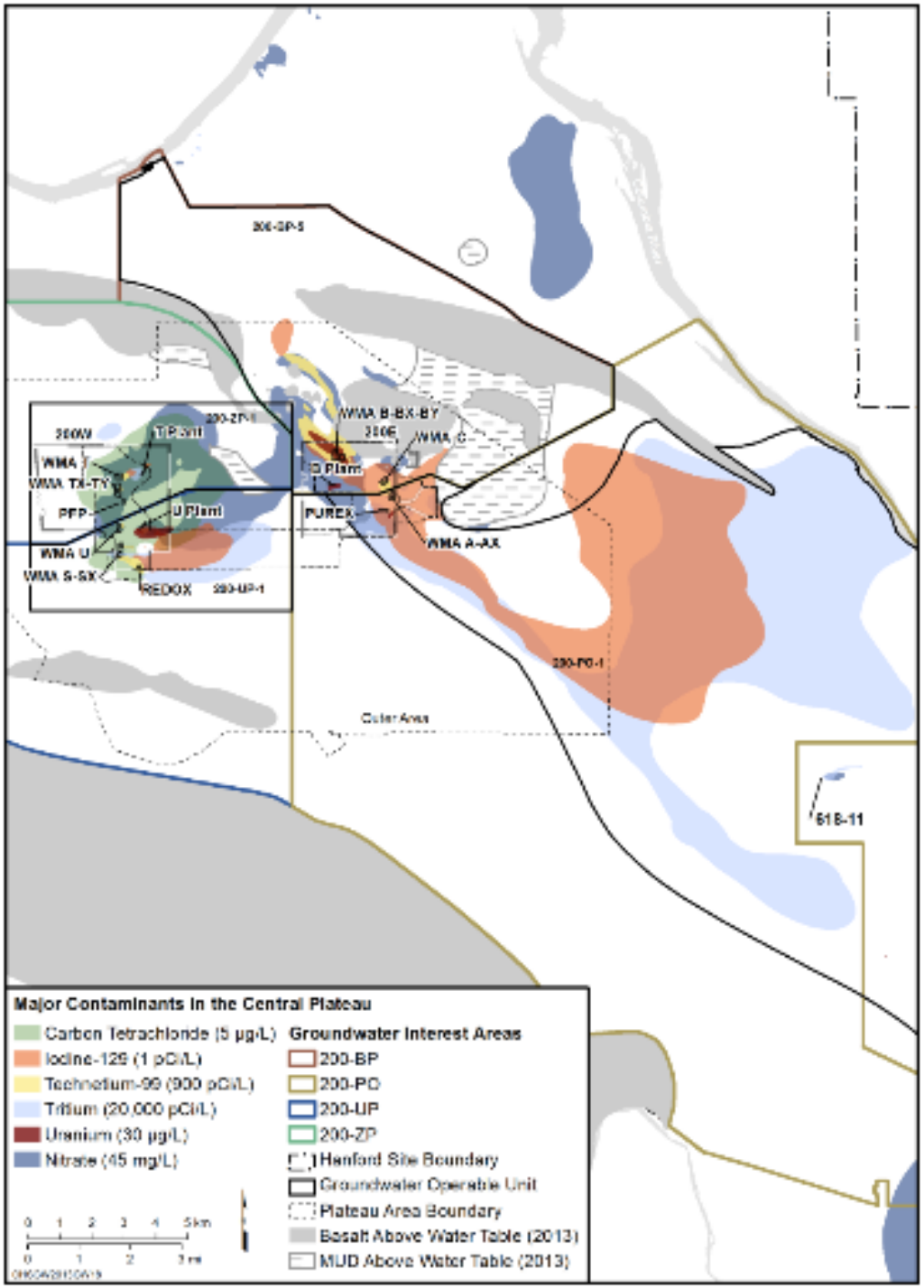



Figure D-20. C Tank Farm Visualization

OREGON DEPARTMENT OF ENERGY




OREGON DEPARTMENT OF ENERGY