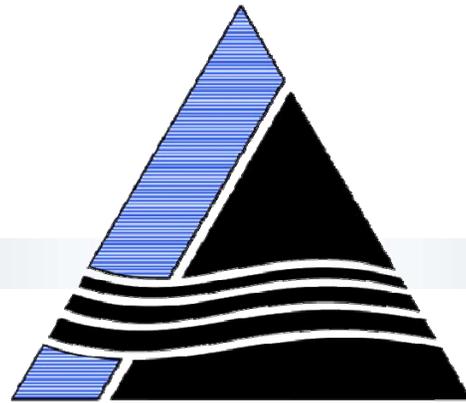


Update on 100 Area River Structures Cleanup



Tri-Party Agreement

U.S. Department of Energy
Washington State Department of Ecology
U.S. Environmental Protection Agency

Mark French

DOE Federal Project Director

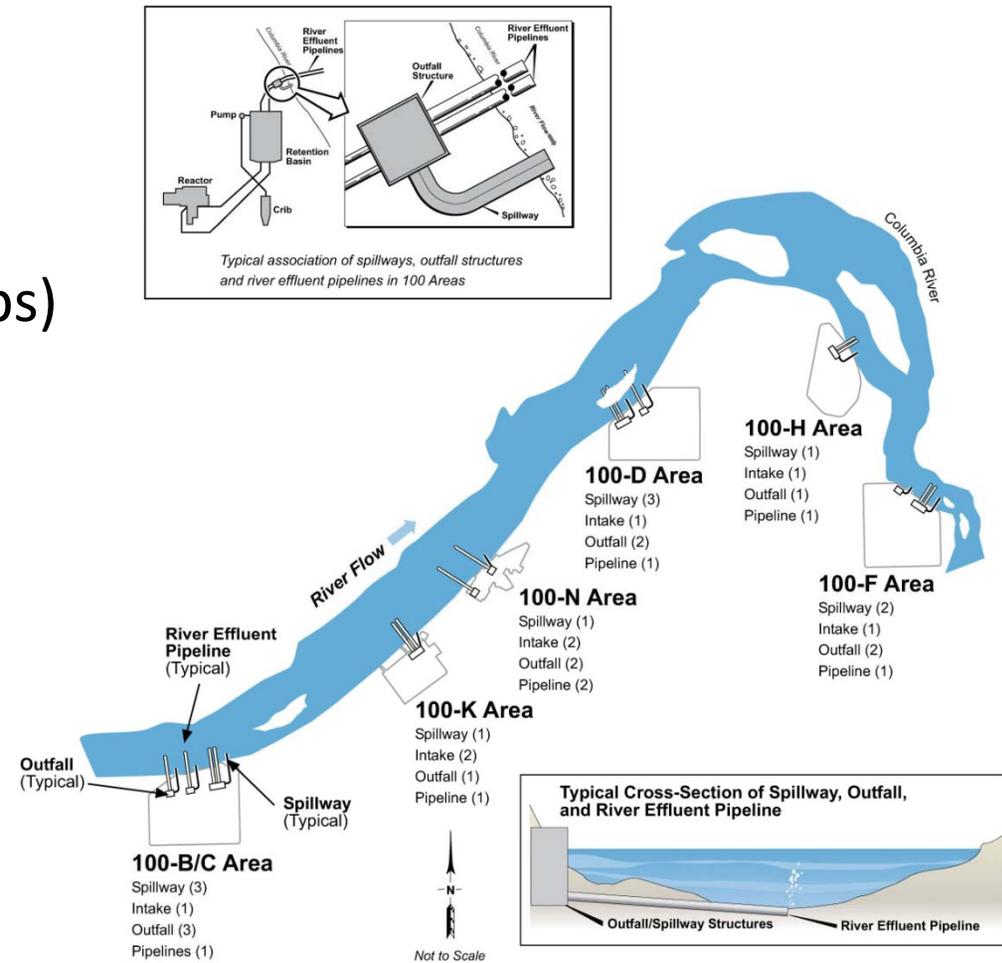
River Structures

- The purpose of this presentation is to provide:
 - information on the river structures
 - a status on cleanup of river structures
 - discuss upcoming demolition activities to be performed at 100-N and 100-K

100 Area River Structures

Four Categories of River Structures:

- Intake structures (8)
- Outfall structures (11)
- Spillways (11)
- River pipelines (7 groups)



Intake Structures

Definition: a river water pump house that provided the water to operate Hanford's production reactors and other Hanford Site needs.

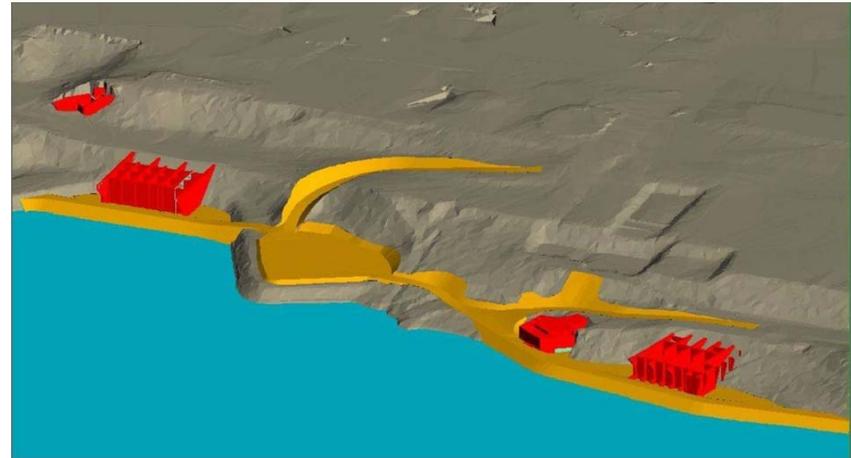
- Active : 100-BC and 100-D Areas intake structures
- Demolished : 100-H and 100-F Areas intake structures
 - 100-H Intake Structure demolished in 1974
 - 100-F Intake Structure demolished in 1977
- Scheduled for Demolition: the four intake structures at 100-N and 100-K Areas
 - Existing Ancillary Facility Action Memoranda for each area authorize demolition of these structures

Intake Structures: Consultation Process

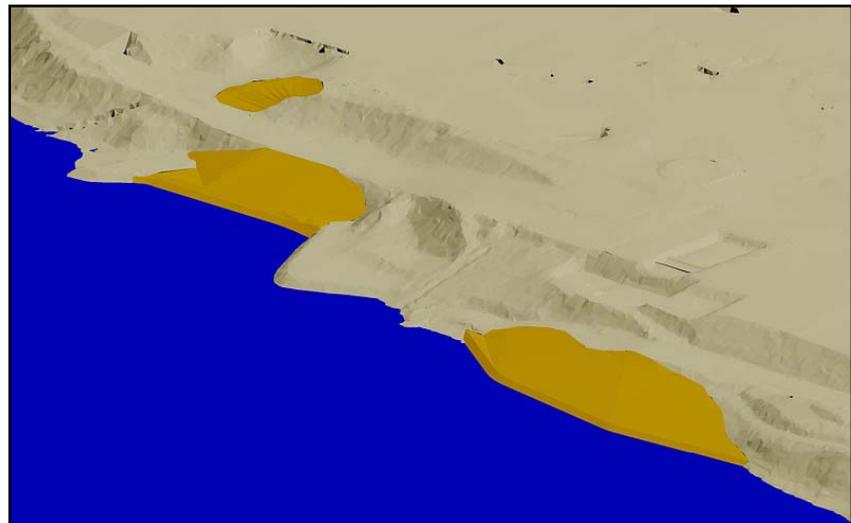
- To minimize adverse impact to the Columbia River, the demolition approach for the 100-N and 100-K intake structures and one 100-N outfall structure is being developed by DOE and its contractors in consultation with:
 - U.S. Fish and Wildlife Service
 - National Marine Fisheries Service
 - U.S. Army Corps of Engineers
 - Washington State Department of Ecology
 - Washington State Department of Natural Resources
 - Washington State Department of Fish and Wildlife
- Consultation for these projects is ongoing and will be completed in December
- In addition, we are working with the Tribal Nations to ensure cultural and historical resources are protected
- Discussions with these agencies and Tribal Nations will continue during preparations for demolition

100-N Demolition Plan

1. Remove drive motors and pump housing
2. Remove all hazardous substances and characterize remaining structure
3. Construct an earthen bench (~50,000 cubic yards), into the Columbia River during the in-water work window to minimize disturbance to the river
4. Demolish buildings in place
5. Backfill, contour, and revegetate to blend into the surrounding terrain



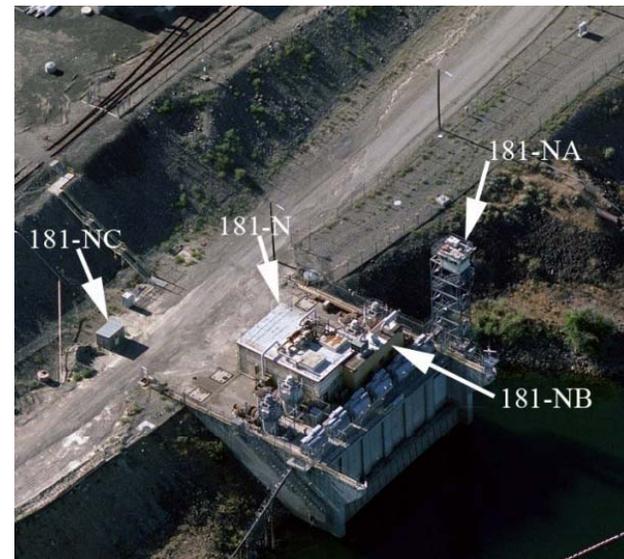
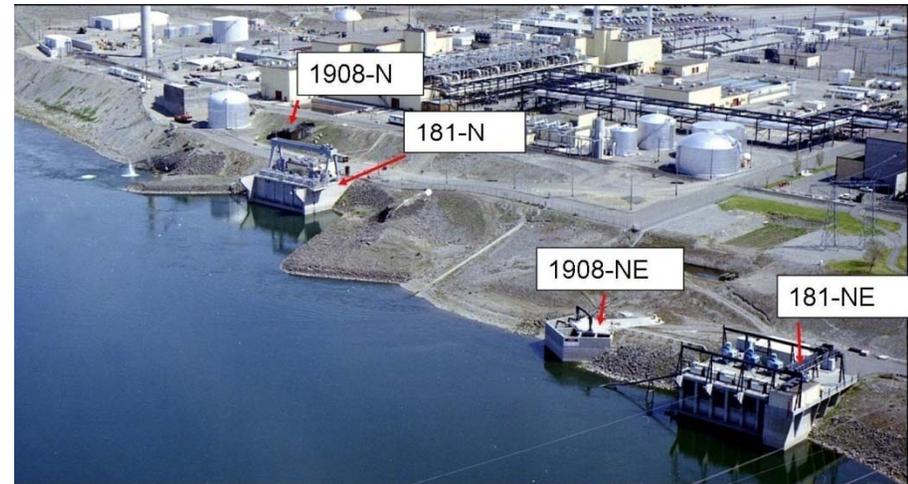
100-N River Structures after bench installation (Artist rendering)



100-N River Structures demolition complete (Artist rendering)

Intake Structures: 100-N Area

- Facilities to demolish include:
 - 181-N Intake Structure
 - 181-NE Intake Structure
 - 1908-NE Outfall Structure
- Protective measures to be implemented for bench construction include:
 - installation of silt curtains at the edge of the cove to prevent material entering the Columbia River
 - in-water work window has been identified to reduce impact to migratory fish
 - Monitoring the turbidity levels in the Columbia River during bench installation



Intake Structures: 100-K Area

- Facilities to demolish:
 - 181-KE Intake Structure
 - 181-KW Intake Structure
- The 100-K structures are smaller in size than the 100-N structures and are located in coves off the main channel
- Protective measures to be implemented for bench construction include:
 - installation of silt curtains at the edge of the cove to prevent material entering the Columbia River
 - in-water work window has been identified to reduce impact to migratory fish
 - 100-K intake demolition project is ARRA funded



KE intake structure in 1983



Aerial View of 100-K Intake Structures

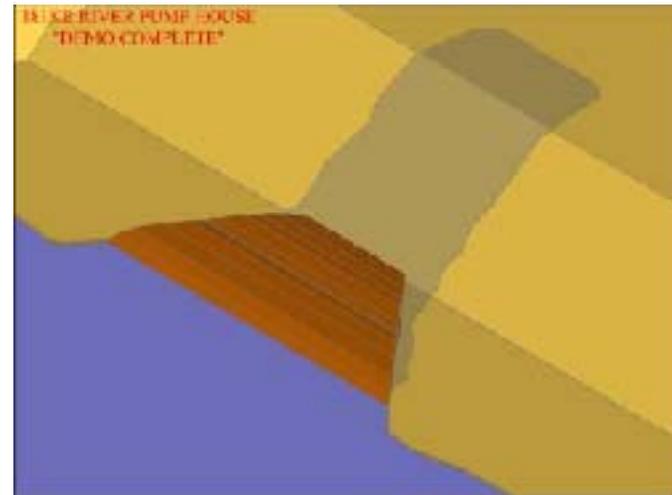
100-K Demolition Plan

Demolition Plan:

1. Construct a native rock berm barrier (Approximately 5,400 cubic yards of material) in the river up against the structures so demolition can proceed with minimal risk of river disturbance
2. Remove hazardous substances
3. Remove drive motors and pump housing
4. Demolish and partially haul away buildings to an approved disposal facility
5. Backfill and contour to blend into the surrounding terrain



181-KE River Pump House before demolition
(Artist rendering)



181-KE River Pump House demolition
complete (Artist rendering)

Outfall Structures

- Outfalls routed reactor cooling water or other effluents to the river pipelines or to a spillway
- Cleanup of the structures is addressed under existing CERCLA decision documents

Area	Outfalls	Status
100-BC	3	Interim closed out in 2002
100-K	1	Planned for remediation
100-N	2	Planned for remediation
100-D	2	Currently being remediated
100-H	1	Currently being remediated
100-F	2	Interim closed out in 2006

Spillways

- Used as an alternate discharge pathway to the river
- Remediation above Ordinary High Water Mark (OHWM) is addressed within the existing 100 Area Interim Action Records of Decision
- Portions of spillways below the OHWM will be addressed in the final 100 Area Record of Decision

Area	Spillways	Status
100-BC	3	1 remediated 2 no action
100-K	1	Planned for remediation
100-N	1	Planned for remediation
100-D	3	Currently being remediated
100-H	1	Currently being remediated
100-F	2	Interim closed out in 2006

River Pipelines

- The river pipelines received reactor cooling water through the outfall
- An evaluation of the river pipelines in 2005 determined that disposition of the pipelines would be made with the final 100 Area Record of Decision



Construction of river pipelines at 100-D Area with spillways in the background



Construction of river pipelines at 100-N Area

Goals for River Structures Cleanup at 100-N and 100-K Areas

- Protect threatened and endangered species along the Columbia River by minimizing noise, debris, and other potential impacts to ecosystems
- Maintain water quality of the Columbia River
- Proceed carefully with work in the culturally sensitive areas
- Accommodate seasonal and daily changes in Columbia River water elevations (i.e., working below the Ordinary High Water Mark) with mindset for worker safety and ecological/cultural resource protection
- Continue to work with regulatory agencies, Tribal Nations, and stakeholders