

618-10 & 11 Burial Ground Remediation Planning

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River Corridor Closure Project
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618-10/11 Burial Grounds

- Burial grounds operated in support of 300 Area work
- 618-10 operated from 1953-1964.
 - 12 trenches and 94 VPUs
- 618-11 operated from 1962-1967
 - 3 trenches and 54 VPUs and 5 caissons
- 300-FF-2 ROD provided CERCLA decision to remediate
- Remediation is part of RCCC but not enough characterization data available to start remediation/planning.
 - Inconsistent records on what is actually in the burial grounds
 - Both contain very high dose items in VPUs and caissons.
- TPA requires remediation of the burial grounds by 2018.



Aerial View of 618-10

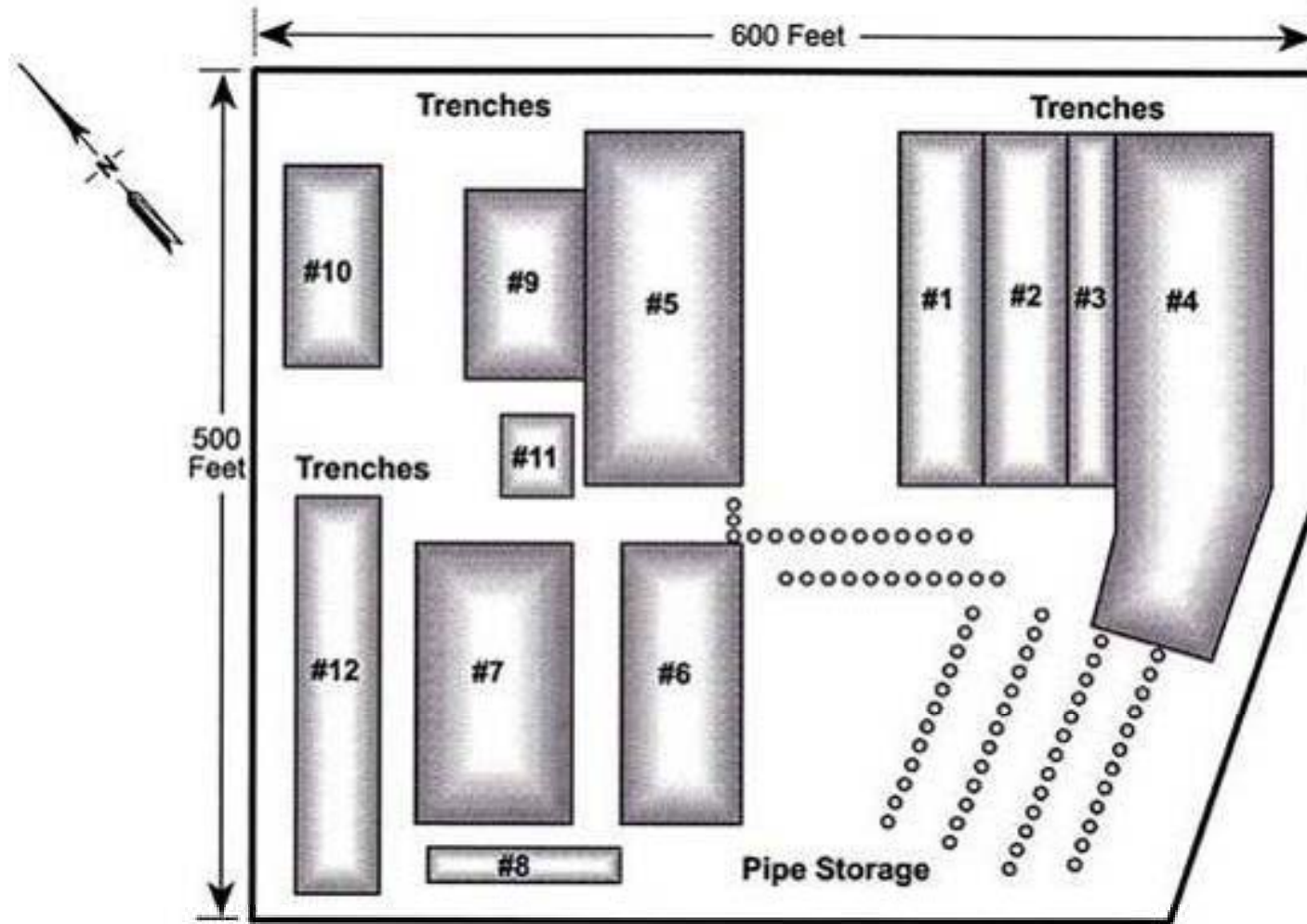


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618-10 Burial Ground



Waste Disposal at 618-10



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Aerial View of 618-11

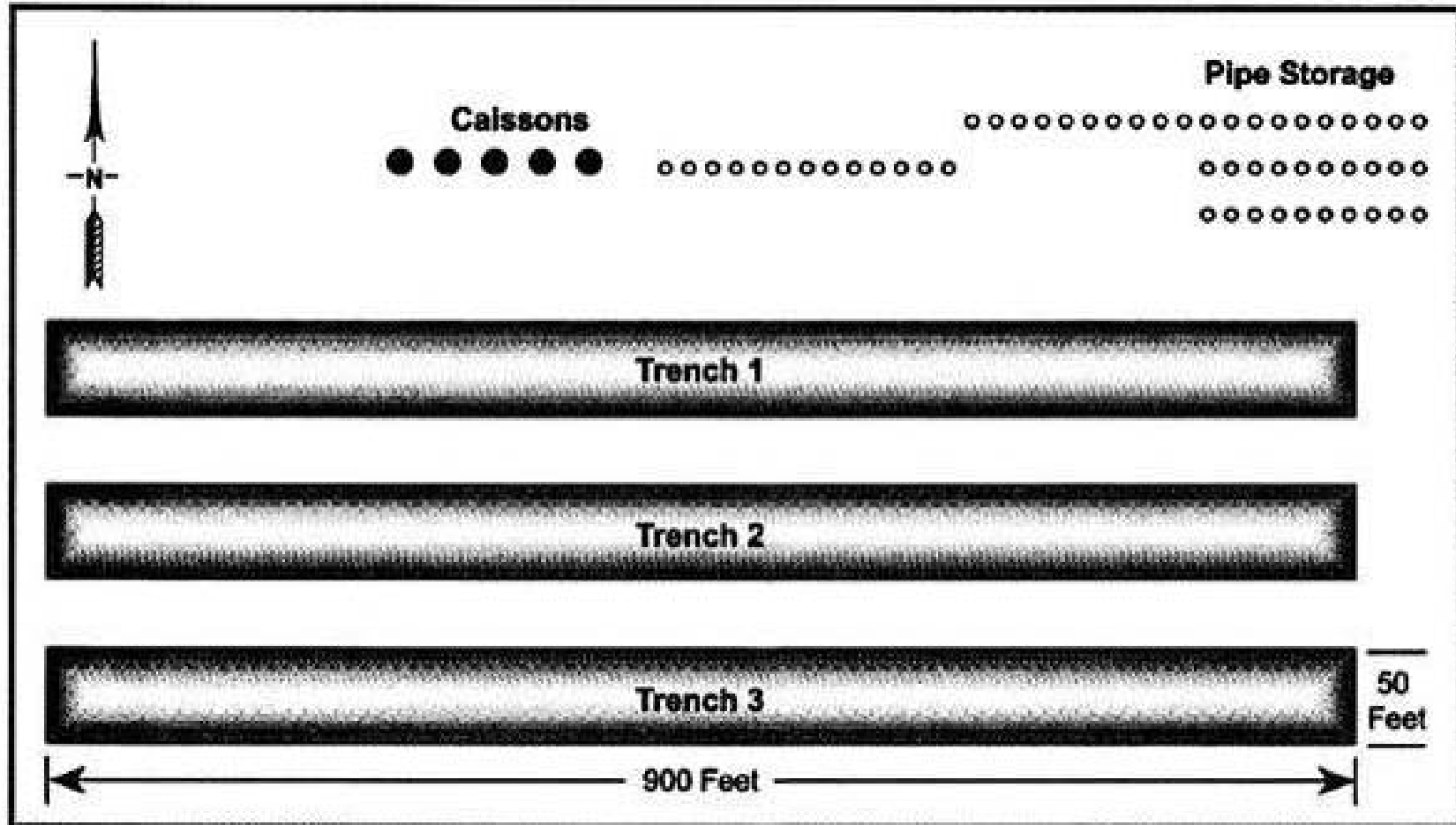


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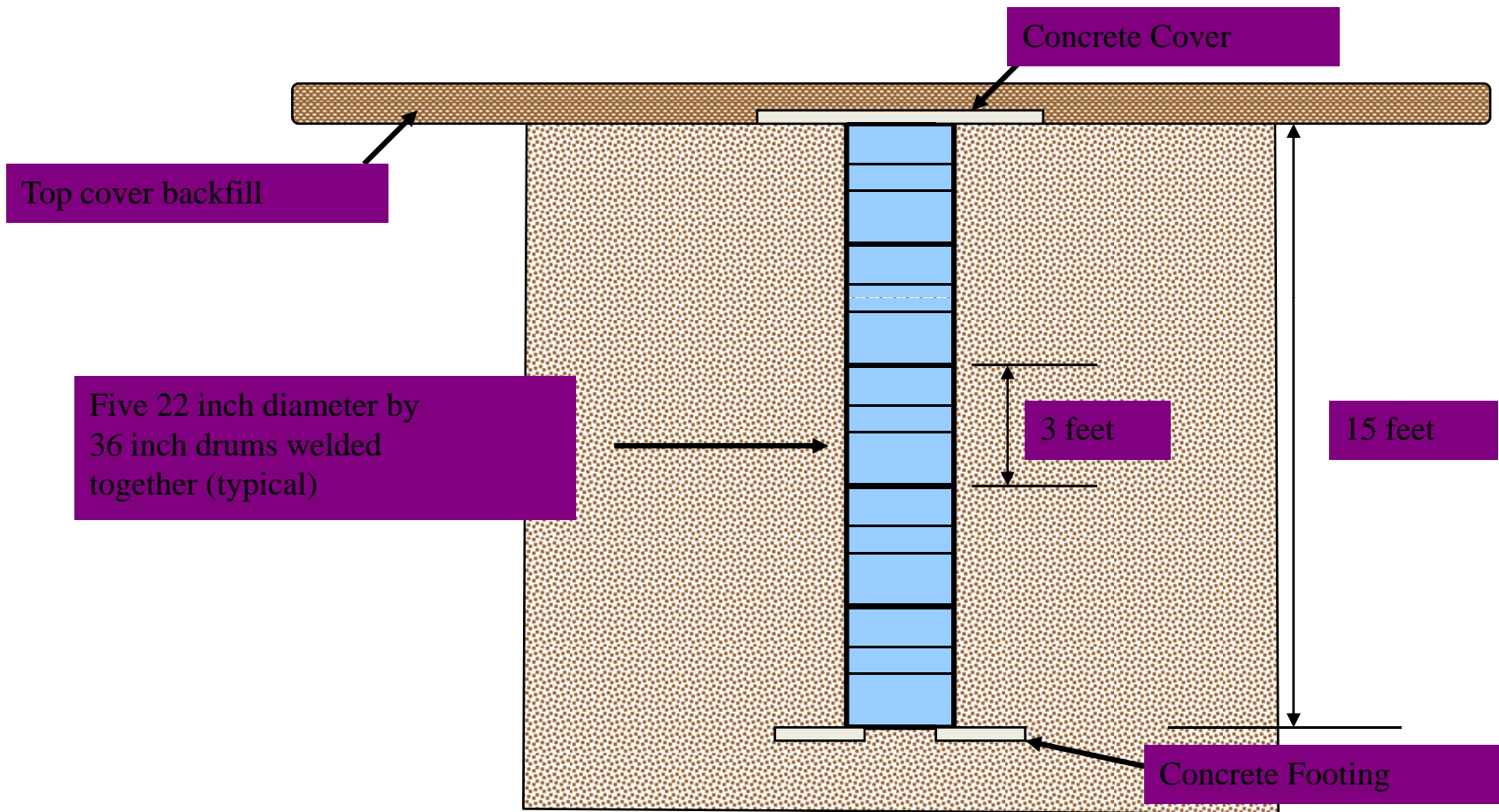
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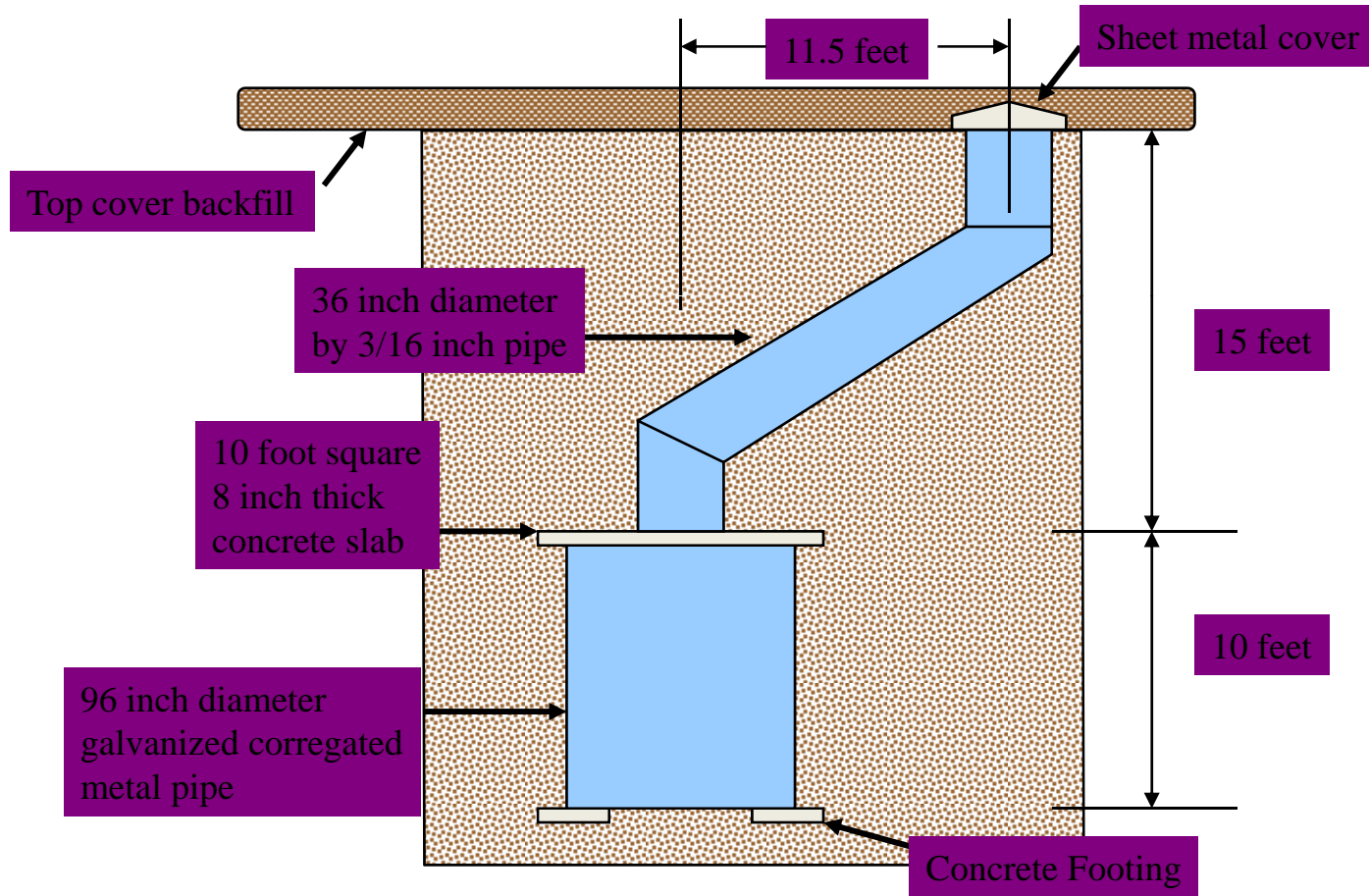
618-11 Burial Grounds



Vertical Pipe Units



618-11 Caissons



Waste Disposal in a Caisson



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Plan of Attack

- Previous approach was to remediate both burial grounds in parallel.
- Approach revisited in 2009 to address:
 - Desire to “get on with it.”
 - Critical path to completion of River Corridor Closure Project and achieve 2015 Vision.
 - Interface with Columbia Generating Station NRC license may impact start of 618-11.



Plan of Attack

- Current approach
 - Perform remediation in series (618-10 then 618-11)
 - Perform NIC of 618-10 trenches and VPUs
 - Start remediation of 618-10 trenches as data is obtained
 - Use lessons learned from 618-10 in planning for 618-11
 - Initiate/accelerate work using ARRA funds
 - Finish both by 2015



Non-Intrusive Characterization

- Perform Geophysics to locate VPUs
 - Ground Penetrating Radar
 - Electromagnetic Imaging
- Drive ~ 400 Cone Penetrometers (CPTs) throughout each site
 - 4 around each VPU
 - 6 around each caisson
 - At 25 ft. centers in trenches
- Characterize using instrument string inside CPTs
 - Dose rate (Trenches, VPUs, and Caissons)
 - Speciation (VPUs)
 - Fuel fragment signature (VPUs)
 - TRU concentrations (VPUs)



Non-Intrusive Characterization

- Take soil samples from outside of and beneath VPUs and Caissons
 - Drive cone penetrometer with removable tip to bottom of VPU or caisson
 - Remove tip and insert core sampling tool
 - Drive core sampling tool to obtain sample
- Soil samples to be collected at each Caisson and approximately 10% of VPUs
 - 10 VPUs at 618-10
 - 5 VPUs at 618-11



Next Steps

- Start NIC in August
 - Contract awarded to NorthWind, Inc.
 - NorthWind performed similar work at 118-K-1 Burial Ground
- Start planning for remediation of trenches
 - Assume remediation can be performed similar to other burial grounds (e.g. 618-7)
- Adjust approach as more information is gathered

