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WASHING  
DEPART  
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# LDR Hanford Site Specific Variance Request/Approval

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Nuclear Waste Program

# LDR Variance Request

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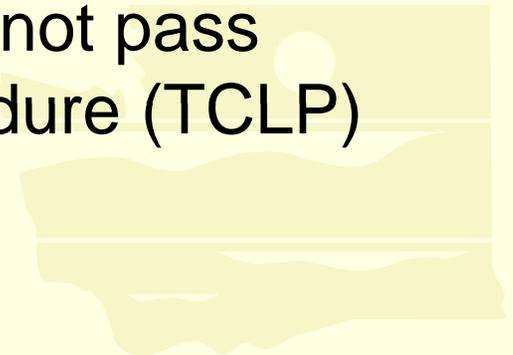
- Hanford has 3 Land Disposal Restrictions (LDR) Requirements to follow:
  - TPA Milestone M-26 for an Annual Report of mixed waste
  - WAC 173-303-140 – State LDR
  - 40 CFR requirements that WA is not authorized
    - 40 CFR 268.42 (b)
    - 40 CFR 268.44 (a) through (g)
    - 40 CFR 268.5
    - 40 CFR 268.6
    - 40 CFR 268 Subpart B



# LDR Variance Request

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- Received a Variance Request from USDOE/PNNL
  - Per WAC 173-303-140 (2)(a) which incorporates 40 CFR 268.44 (h)
  - Site – Specific treatment for approximately 5 kgs of D005 mixed waste
  - Due to toxicity from Barium – it did not pass Toxicity Character Leaching Procedure (TCLP) analysis



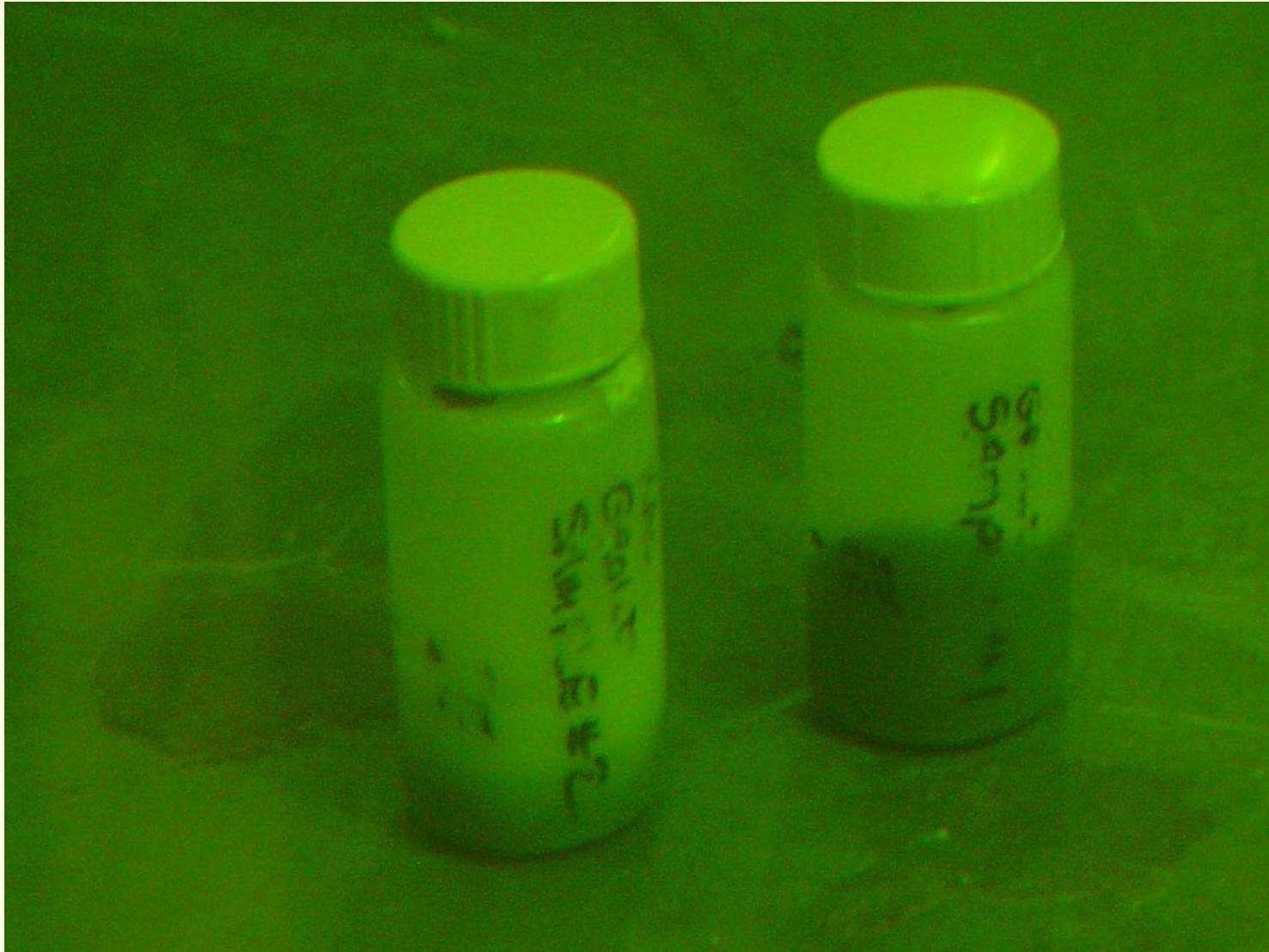
# LDR Variance Request

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- Received a Variance Request from USDOE/PNNL
  - Waste had been originally treated with a ferrous sulfate heptahydrate solution to precipitate Radium, Barium, and other heavy metals (Cd, Cr, Pb, Th)
  - Remaining waste was then neutralized and a mixture of blast furnace slag/Portland cement grout

# LDR Variance Request

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# LDR Variance Request

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- What are the problems with meeting the LDR standard?
  - Waste originates from PNNL's Radiochemical Processing Lab – Very High Dose reading 27 R/hr
  - LDR requirements state that the waste would need to be pulverized and re-grouted

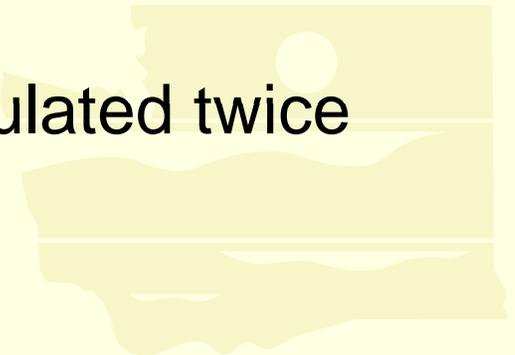


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# LDR Variance Request

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- Why should the Variance Request from USDOE/PNNL be granted?
  - Variance would allow alternative method of encapsulation (approved for debris)
  - Alternative encapsulation method would be protective of worker human health and the environment
  - Waste would end up being encapsulated twice



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# LDR Variance Request

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- Alternative Encapsulation Method
  - Commercial macroencapsulation method using an HDPE lined DOT approved container
    - Play Video



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