

Risk Informing the Part 61 Classification System – State and Licensee Issues

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What does risk informing Part 61 classification system really mean?

- Part 61 is one of the first NRC regulations that was risk/performance based.
- How can it be improved from a risk informed basis?
- Major options:
 - Recalculate current system using updated dose models and current waste streams
 - Use site specific performance assessment – adopt DOE methodology
 - Use a hybrid for certain radionuclides – already proposed for DU

Recalculate current system

- Pro
 - Maintains current, well understood system
 - ✓ Minimizes changes to current regulations and guidance
 - ✓ No changes to state laws
 - ✓ Continue using characterization infrastructure with minimal changes
 - ✓ Minimal disposal license condition changes
- Con
 - Requires changing date certain Compact disposal responsibilities in LLWPA
 - Requires using most limiting climate (wet site) - unless wet/dry classification is implemented
 - Limits for certain radionuclides may become more stringent – U-238 and Cs-137

Site specific performance assessment

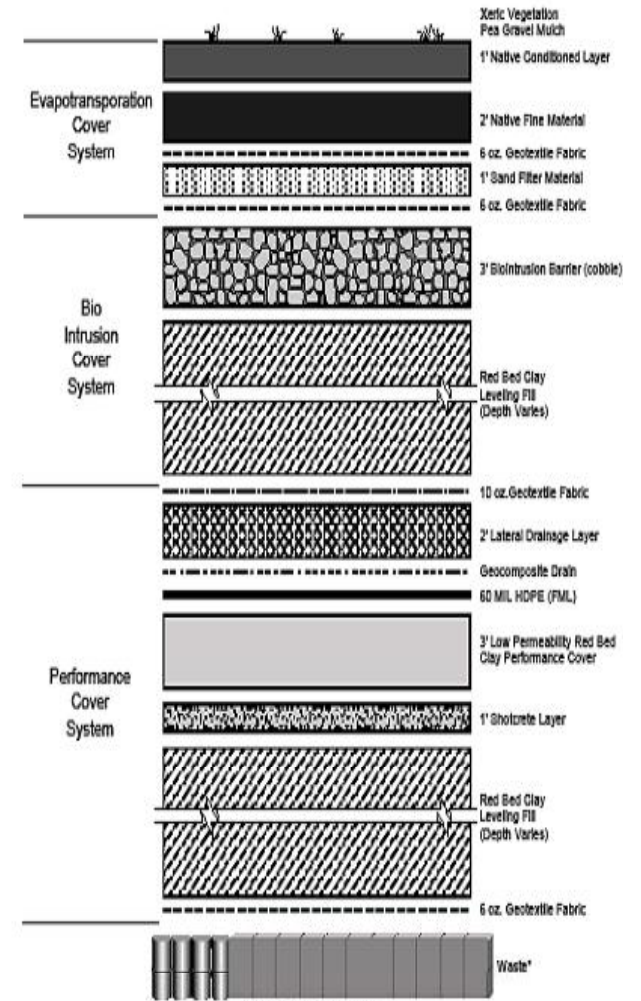
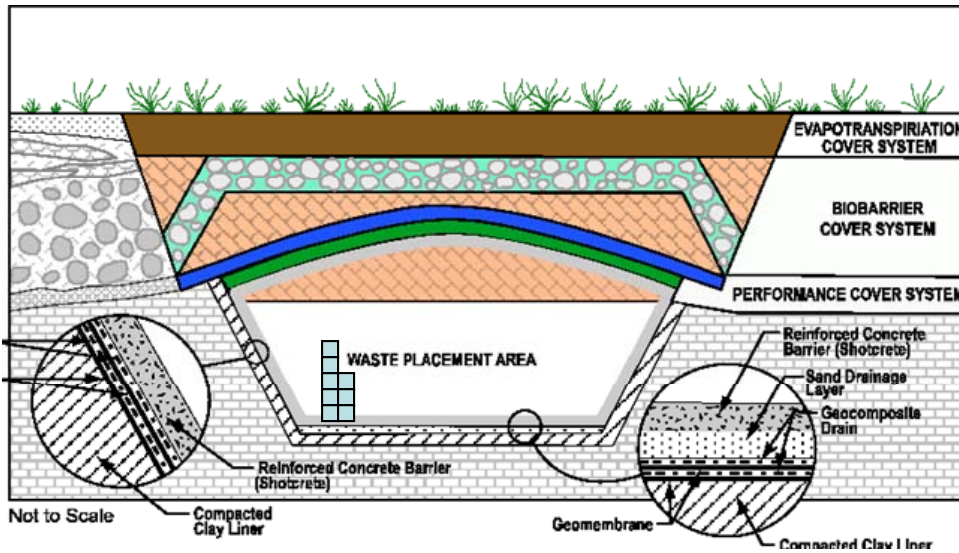
- Pro
 - Most risk informed approach
 - DOE methodology seems to work well
- Con
 - Requires new regulatory and guidance infrastructure
 - Requires detailed implementation regulations to insure state compatibility and level playing field
 - Unique waste concentration limits for each site may require more detailed characterization requirements
 - State and Federal laws will need to change – Politics may not make this easy in some states
 - Most public opposition

Other issues

- Intruder scenario
 - Basis of current limit – 100, 300, and 500 year hazardous life may not be realistic
 - Need to rethink how the intruder performance objective is satisfied – regulatory requirements are currently vague
- Performance assessment
 - May need to use more consistent models and memorialize assumptions in regulations
- Unique waste streams
 - Certain waste streams not specifically analyzed in Part 61 EIS - including large amounts of U-238 and waste streams at or near the class limits

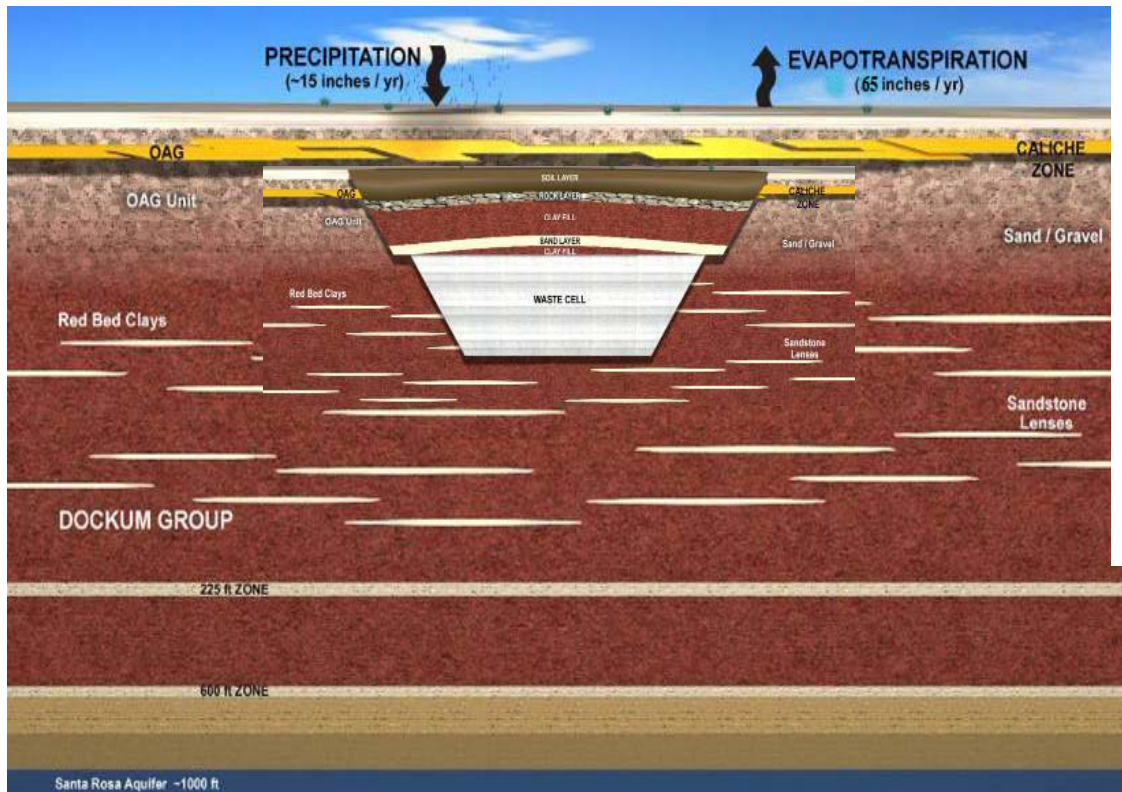
Other issues (Cont)

- Other laws that may be impacted
 - Definition of TRU waste – 100 nCi/gm
- Political issues
 - States may not be willing to change current laws to implement
 - Will need a broad consensus up front to assure implementation problems are minimized



Cover System Components
Scale: NTS, Exploded View

Note: * Figure as shown is for the PFW - CCU concrete containers replaced by non-concrete waste in the PFW - NCDU.



Summary

- Need to first determine methodology – may be most difficult part of decision-making process
- Need to consider changes required to state and federal laws - Changes may create political problems
- Need to institutionalize intruder scenario
- Minimize impacts to licensees, state regulators, and disposal sites