

		Pit Type			
		W76 (Type 116)	W78 (Type 117)	W87 Reuse (MC3737)	W87 New (MC4597)
Pit Down-select Metrics	Security	Not a Discriminator			
	Safety			✓	✓
	Certification			✓	✓
	NEP Interoperability	Not a Discriminator			
	Reuse/Remanufacture Cost	✓	✓	✓	
	Responsive Infrastructure				✓

  

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
1 <sup>st</sup> Review Date: 5/27/2022	DETERMINATION (CIRCLE NUMBER(S))
Authority: <input type="checkbox"/> DC <input checked="" type="checkbox"/> DD	1. CLASSIFICATION RETAINED
Name: R.L. Shankle	2. CLASSIFICATION CHANGED TO:
2 <sup>nd</sup> Review Date: 6/9/2022	3. CONTAINS NO DOE CLASSIFIED INFO
Authority: DD	4. COORDINATE WITH:
Name: K. Scheffter	5. CLASSIFICATION CANCELED
	6. CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY):

~~SECRET~~

DOE  
b(3)

- Security: Both pit types can be deployed with threshold or objective security
- Safety:  
Type 116/117 Pits: Have not been fielded with IHE; do not meet Fire Resistant Pit definition; and require retubulation for Multi Point Safety (MPS) implementation  
  - ✓ W87 Legacy: Has been fielded with IHE, meets Fire Resistant Pit definition, but would require retubulation for MPS implementation
  - ✓ W87 New: Would meet all safety requirements
- Certification:  
Type 116/117 Pits: No direct underground tests with IHE, but some related tests; certification basis will be established based on simulation, a series of hydrotests, and potentially subcritical experiments  
  - ✓ W87 Legacy: 6 UGTs, is fielded with IHE, and is certified
  - ✓ W87 New: W87 legacy UGTs are direct tests of W87 New design; simulation, hydro tests, and potentially subcritical experiments will be used to verify performance
- NEP Interoperability: Not a discriminator based on interoperability in either aeroshell
- Quantity and Availability:  
  - ✓ Type 116 Pits: Enough to complete with no additional drawdowns
  - ✓ Type 117 Pits: Enough to complete with modest stockpile adjustments of deployed W78-0s  

[REDACTED]

 DOE b(3)  
 W87 New: Engineering development units only, produced in FY2013
- Reuse/manufacture:  
  - ✓ Type 116/117 Pits: Based on W76-1 work, the costs are less than \$2M/year
  - ✓ W87 Legacy: Based on W76-1 work, the costs are less than \$2M/year
  - W87 New: Highest cost alternative, approximately \$200M/year through the end of the LEP build
- Responsive infrastructure:  
  - Type 116/117 Pits: Does not require responsive infrastructure
  - W87 Legacy: Does not require responsive infrastructure
  - ✓ W87 New: Building new pits is the only choice consistent with NPR commitments to modernizing an aging nuclear infrastructure