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# 618-4/ 618-5 Burial Ground 300-FF-1 OU

## Drum Staging Options



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EDMC

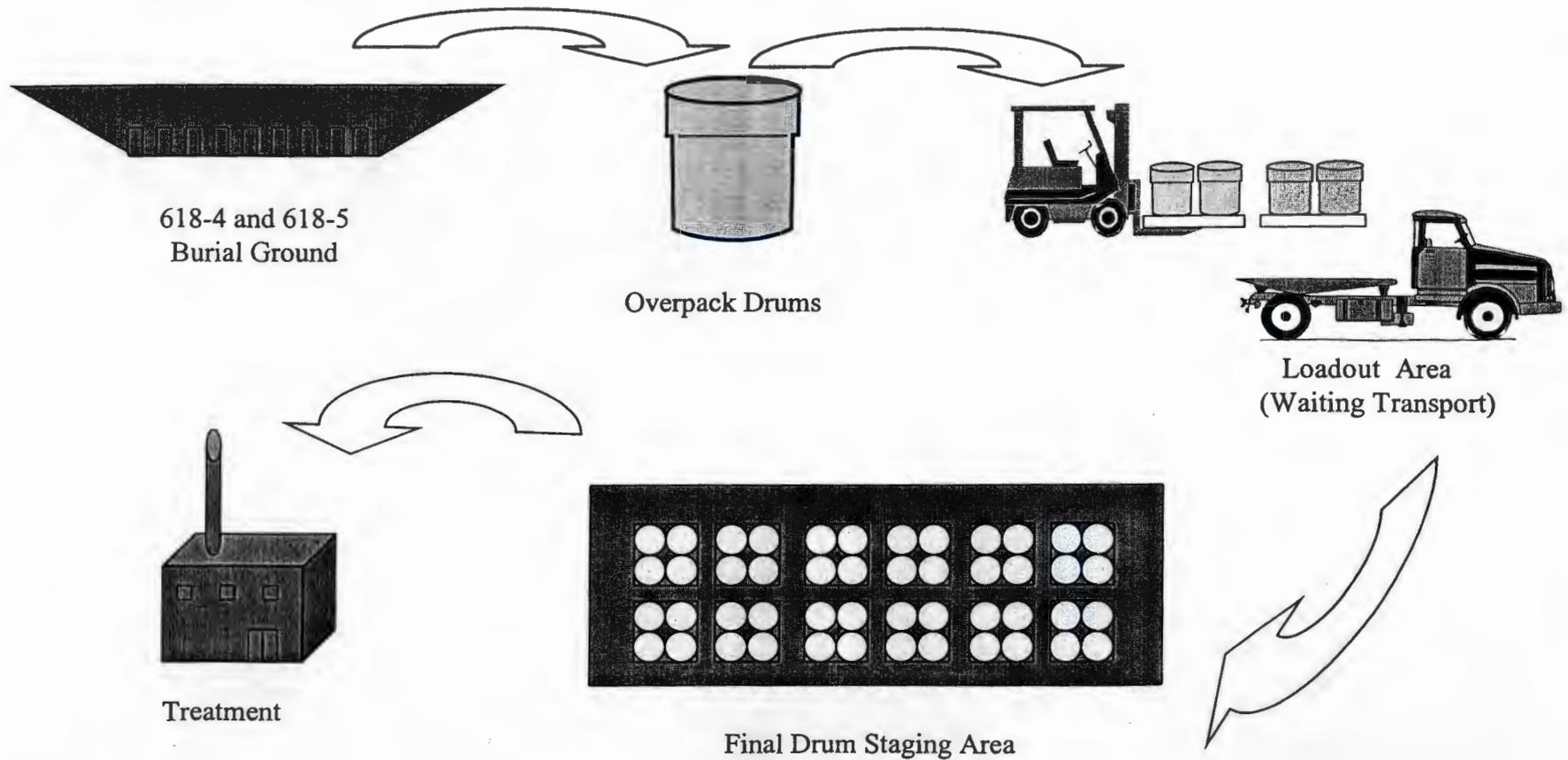
August 14, 2001

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# Drum Staging Schematic





## Requirements:

- Drums will be relocated from 300 Area RA sites
- Drums will be moved in FY 2002
- Drums will be packaged in DOT compliant containers
- Final Staging Area to accommodate 1,500+ drums

Assumption: Treatment capability will not be available until 10/1/02 (FY 03) or later



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## Options Considered<sup>1</sup>

	ROM Cost	Schedule (mo)
CWC-Warehouse	\$2,680,000	12
CWC-Modular Units	\$1,720,000	9
ERDF	\$ 520,000	9
Building 314	\$ 410,000	9
Building 3713/A	\$ 380,000	6
U Plant Storage Pad	\$ 376,000	8

1) Cost and Schedule numbers are for comparison purposes only and should not be used for budgeting

# Comparison of Staging Options

## OPERATIONAL CONSIDERATIONS

- 1) Storage can be expanded to 3,000 drums
- 2) Facility control can be transferred to the ERC
- 3) Facility could be used to support 100/200 Area ER Projects
- 4) Facility requires no additional staff to operate
- 5) Can be easily integrated with waste disposal operations
- 6) Requires minimal or no facility modifications

	CWC-Modular Storage CWC-Warehouse	ERDF	Building 314	Building 3713/A	U Plant Pad	
1) Storage can be expanded to 3,000 drums	X		X	X		
2) Facility control can be transferred to the ERC			X	X	X	X
3) Facility could be used to support 100/200 Area ER Projects	X	X	X			X
4) Facility requires no additional staff to operate	X	X	X			
5) Can be easily integrated with waste disposal operations			X			
6) Requires minimal or no facility modifications	X					X

# Discriminating factors between Options

	Advantages	Disadvantages
CWC Warehouse	<ol style="list-style-type: none"> <li>1. Permitted facility designed for waste storage</li> <li>2. Drum ownership transferred to PHMC</li> <li>3. Drums stored in building</li> </ol>	<ol style="list-style-type: none"> <li>1. Very high, non-refundable storage fee</li> <li>2. Prohibited from receiving pyrophoric waste</li> <li>3. High up front cost to change waste acceptance criteria</li> </ol>
CWC Modular Storage Units	<ol style="list-style-type: none"> <li>1. Permitted waste storage facility</li> <li>2. Drum ownership transferred to PHMC</li> <li>3. Drums stored in building</li> <li>4. Requires less regulatory work than storing in the warehouses units</li> </ol>	<ol style="list-style-type: none"> <li>1. Very high, non-refundable storage fee</li> <li>2. Requires significant drum repackaging to make this option viable</li> <li>3. Prohibited from receiving pyrophoric waste</li> <li>4. High up front cost to change waste acceptance criteria</li> <li>5. High purchase cost for storage units</li> </ol>
ERDF	<ol style="list-style-type: none"> <li>1. Active disposal facility</li> <li>2. Minimal construction costs</li> <li>3. Require no additional staff for management</li> <li>4. Provides future additional capability for ERDF</li> </ol>	<ol style="list-style-type: none"> <li>1. Regulatory and safety documentation drive cost and schedule</li> </ol>

# Discriminating factors between Options

	Advantages	Disadvantages
Building 314	<ol style="list-style-type: none"> <li>1. Located within close proximity to the burial grounds</li> <li>2. No permitting required, can be authorized under CERCLA as an onsite storage area</li> <li>3. High-bay warehouse has good access</li> </ol>	<ol style="list-style-type: none"> <li>1. Building is contaminated and still contains process equipment</li> <li>2. Requires upgrade of fire sprinkler system</li> <li>3. Requires additional staff to monitor</li> <li>4. Requires double stacking to accommodate 3,000 drums</li> <li>5. Availability/impact on 300 Area closure plan unknown</li> </ol>
Buildings 3713/A	<ol style="list-style-type: none"> <li>1. Located within close proximity to the Burial grounds</li> <li>2. No permitting required, can be authorized under CERCLA as an onsite storage area</li> </ol>	<ol style="list-style-type: none"> <li>1. Requires double stacking to accommodate 1,500 drums</li> <li>2. No room for additional expansion</li> <li>3. Building utilities have already been disconnected</li> <li>4. Fire sprinkler system would have to be upgraded</li> <li>5. Building access limited to one rollup door</li> <li>6. Availability/impact on 300 Area closure plan unknown</li> </ol>
U Plant Storage Pad	<ol style="list-style-type: none"> <li>1. Active Category 3 Facility</li> <li>2. No additional construction required</li> </ol>	<ol style="list-style-type: none"> <li>1. Uncertainty with time required to modify authorization basis</li> <li>2. Requires additional staff to operate</li> <li>3. Requires double stacking to accommodate 1,500 drums</li> <li>4. No room for expansion</li> <li>5. Availability to support River Corridor project unknown.</li> </ol>

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## ERDF Most Viable Option

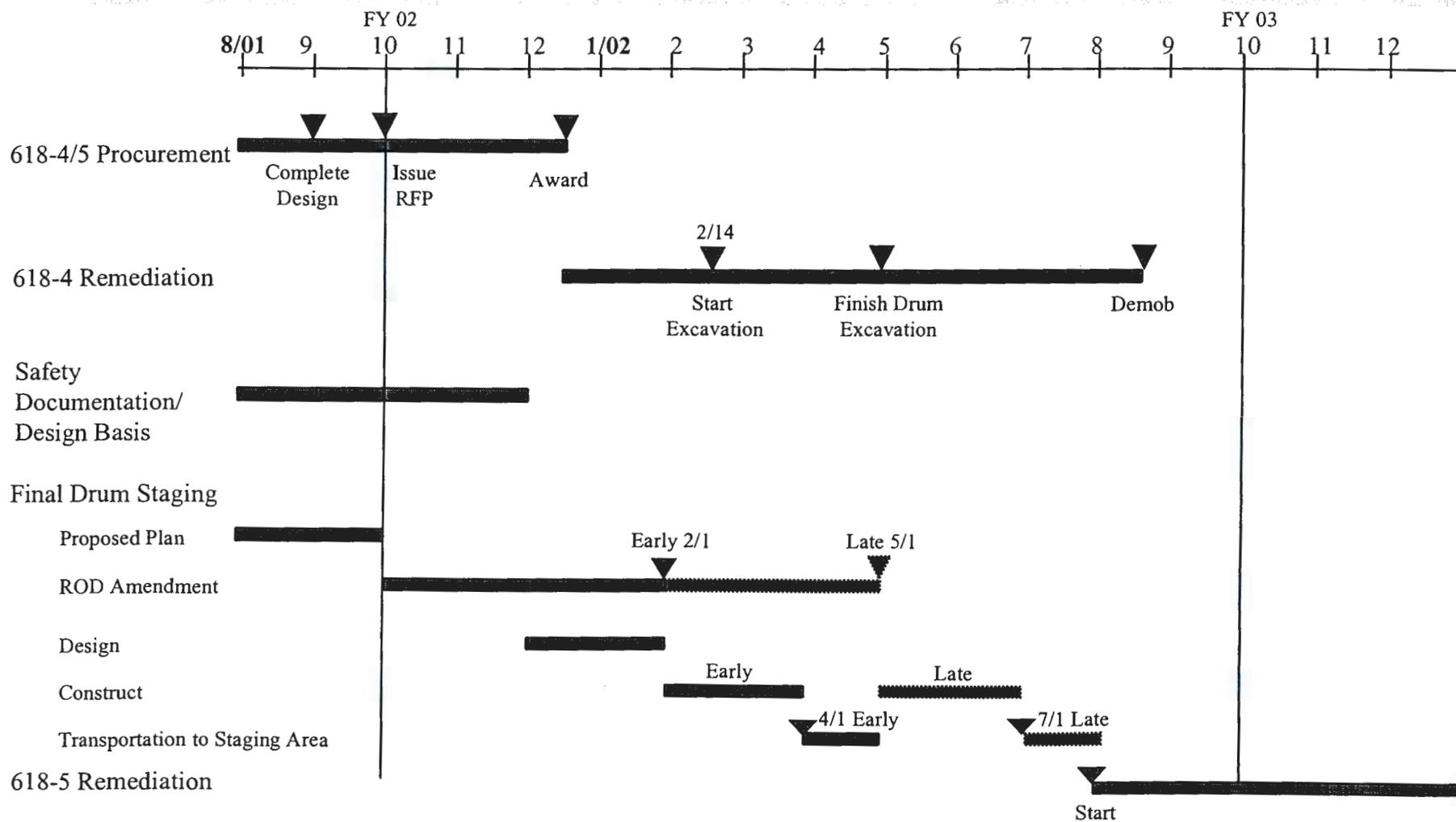
- Has ample room for expansion
- Best location to support other RA sites
- Requires no addition staff/processes to operate
- Most easily integrated with waste disposal operations

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## ERDF Design

The staging area will consist of a 25,000-ft<sup>2</sup> pad (minimum, can be easily expanded) that will accommodate 1,500+ drums; the pad will be constructed on a compacted sub-base and will have a 6-in crushed rock top-coarse (similar to container queue design).

# Drum Disposition Schedule



*Remedial Action and Waste Disposal*

# ERDF ROM Cost

	Item	Quantity	Units	Cost	Cost	%	Cost
Regulatory/ Safety	1) Regulatory Approval (ROD)	750	hrs	100	75,000	1	75,000
	2) Update SAR	850	hrs	100	85,000	1	85,000
	3) Modify Hazard Assessment	350	hrs	100	35,000	1	35,000
Transportatio	1) Repack Non-DOT Drums (Crew-1)	150	drums	219	33,000	1.25	42,000
	2) Palletize Drums (Crew-2)	1,500	drums	68	103,000	1.25	128,000
	3) Transport Drums (Crew-3)	1,500	drums	13	20,000	1.25	25,000
Construction	1) Design and Procurement	500	hrs	100	50,000	1	50,000
	2) Subgrade Prep	25,000	sf	1	25,000	1.25	32,000
	3) Apply 4-in Rock Top Course	25,000	sf	2	38,000	1.25	48,000
	4) No fence required	0	ft	35	0	1.25	0
Maintenance	1) No charge for inspections	24	mo	0	0	1	0
							<b>\$520,000</b>