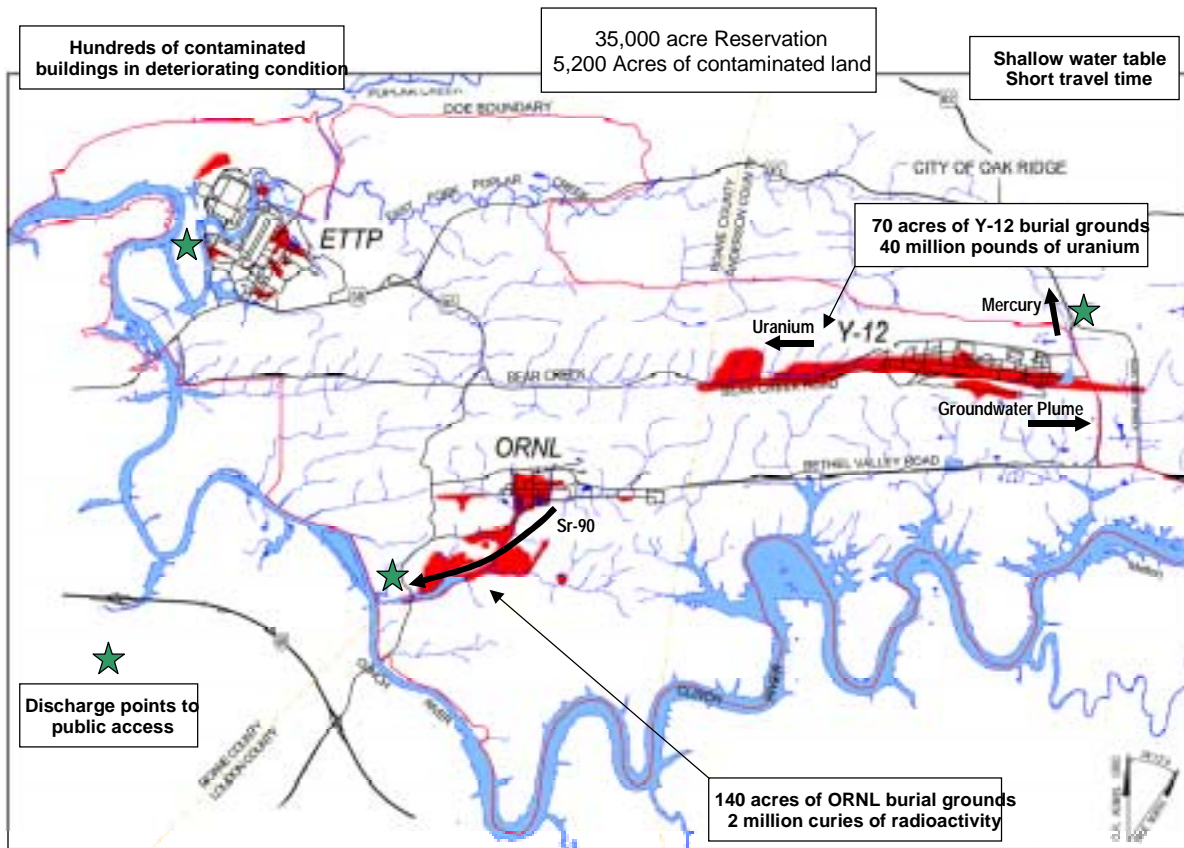


OAK RIDGE ACCELERATED COMPLETION STRATEGY

The overall strategy for cleanup of the Reservation is based primarily on surface water considerations as the Reservation encompasses five distinct watersheds. In fact, surface water is the predominant pathway of contaminant migration because shallow groundwater typically discharges to the nearest surface water body. The Clinch River is the major surface water feature around the Reservation, bounding it from three directions. It is the primary receiver of any releases from contaminant sources from the Reservation. As shown below, there are three primary discharge points including White Oak Creek (downstream from ORNL), Bear Creek (downstream from Y-12), and Poplar Creek (adjacent to ETPP).



Oak Ridge Reservation Risk Drivers

The cleanup strategy is a risk-based approach that focuses first on those contaminant sources that are the greatest contributors of risk. The watershed approach is used to determine which sources are the worst contributors and therefore should be cleaned up as early as possible.

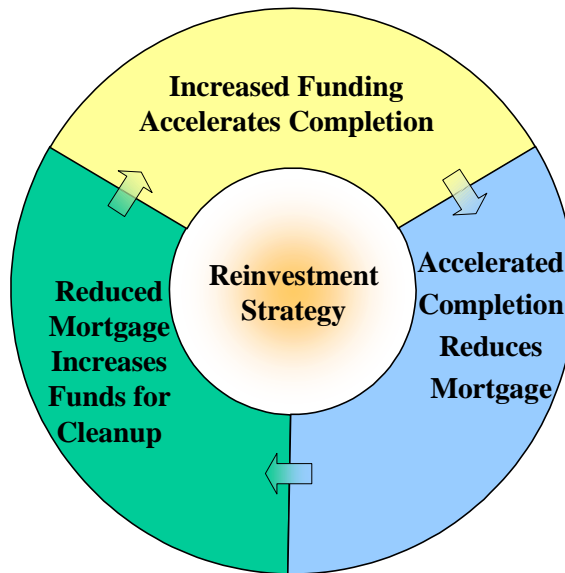
To further refine the overall cleanup strategy, a prioritization system has been developed to help guide decisions where investments should be made. The general priorities are as follows:

- Mitigate immediate onsite and offsite risks.
- Reduce offsite migration of contaminants.
- Remediate sources of surface water and groundwater contamination.

- Remediate remaining onsite contamination.
- Demolish excess facilities.

Cleanup actions to date have mitigated immediate risks and reduced offsite migration of contaminants that posed unacceptable risks under current land use. While risk reduction is certainly the major cleanup driver, another factor that must be considered is mortgage reduction since there is a finite amount of funding available to accomplish the job. Historically, a significant amount of funding went toward the maintenance of infrastructure, primarily at the shutdown ETTP. In fact, nearly \$60 million a year is required for utilities, security, fire protection, and surveillance and maintenance activities. Therefore, the overall Reservation cleanup strategy takes into account risk reduction and mortgage reduction.

The reduction of mortgage costs provides a dramatic benefit due to the reinvestment of these saved funds into accelerated risk reduction. Therefore, an enabler to accelerating risk reduction is elimination of the mortgage costs by demolishing the facilities that drive these costs. Further, as the mortgage reduction increases, the need for Cleanup Reform Account funding diminishes. This reinvestment strategy is depicted in the following figure.



Reinvestment Strategy

Other factors such as execution logic and the efficient use of resources also are considered. Execution logic takes into consideration the logical sequence in which activities must be performed. For example, before a cap can be constructed on a burial ground, facilities in the way must be demolished.

Execution logic also enables efficient resource utilization to reduce costs. An example of the efficient use of resources is to couple the demolition of several buildings in the same geographic area into one contract even though their relative prioritization varies. The combined cost will be less than if contracted separately.

Over the last 3 to 5 years sufficient data have been compiled and assessed in the five distinct watersheds to understand the risks posed. These data indicate that the releases from Melton Valley pose the greatest risk to the public, workers, and environment. By combining the risk-based prioritization of environmental problems with the practical considerations of execution logic, efficient

resource usage, and mortgage reduction, the overall prioritization strategy was developed as shown in the table below.

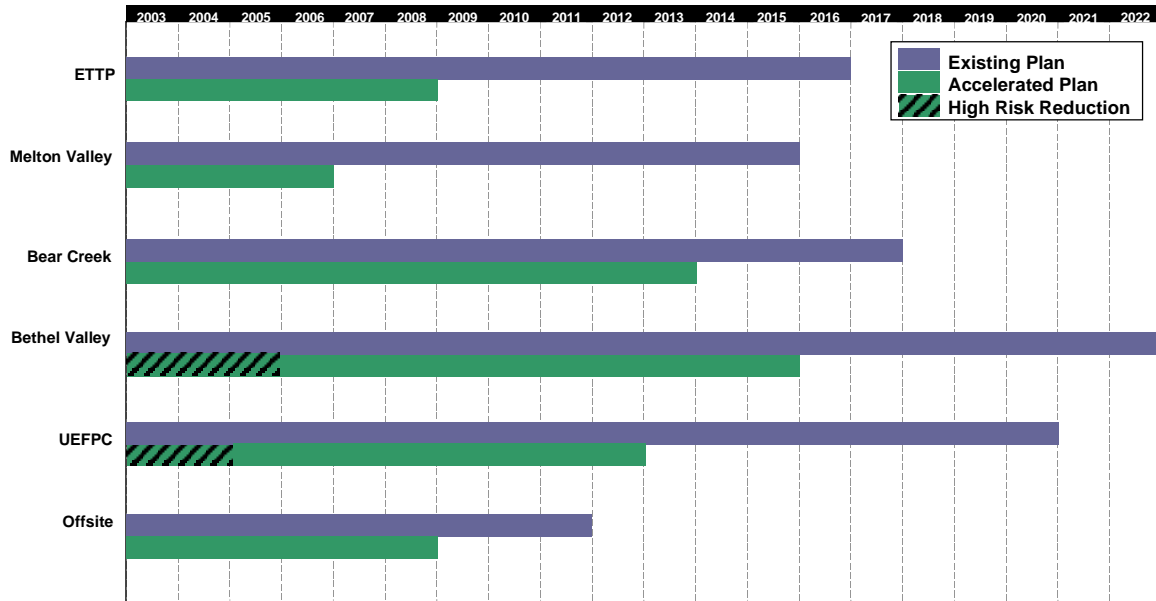
Oak Ridge Reservation Cleanup Prioritization

Priority	Scope	Basis for Priority
1.	Melton Valley	Greatest source of offsite contaminant releases.
2.	Offsite	Private property with public access and risk to current industrial workers.
3.	High-Risk-Reduction Projects in Bethel Valley and UEFPC	Next highest sources of offsite contaminant releases.
4.	ETTP	The deteriorated condition of facilities poses a significant physical risk to maintenance workers. Landlord costs will be significantly reduced, freeing up funds for other remediation efforts. Contaminated soils are a source of contaminant migration to surface water and groundwater. Construction logic dictates that the buildings be demolished prior to soil remediation.
5.	ORNL Building 3026 Demolition	This facility presents a current industrial hazard due to its deteriorated condition and requires high landlord cost.
6.	MSRE	This facility is a safety hazard and requires high landlord cost.
7.	Bear Creek Valley	Release of uranium to Bear Creek.
8.	Bethel Valley	Integrate with ORNL revitalization program. Soil contamination poses potential risk to workers. Construction logic dictates that soil remediation follow building demolition.
9.	Upper East Fork Poplar Creek	Integrate with Y-12 modernization program.
10.	Groundwater	Logic dictates delaying until all sources are remediated.
11.	Chestnut Ridge	Onsite contamination with no known release.
12.	White Wing Scrap Yard	Onsite contamination with no known release.
13.	Clinch River/Poplar Creek Record of Decision	Receptor for entire Reservation; logic dictates delaying until remediation of all sources is complete.

The stored legacy waste is integrated with the actions at the ETTP and Melton Valley because its disposal is a predecessor activity to facility demolition and burial ground capping, respectively. Although not in the way of these actions, all of the remaining legacy waste stored at ORNL and Y-12 will be disposed simultaneously to take advantage of economies of scale and to reduce storage costs.

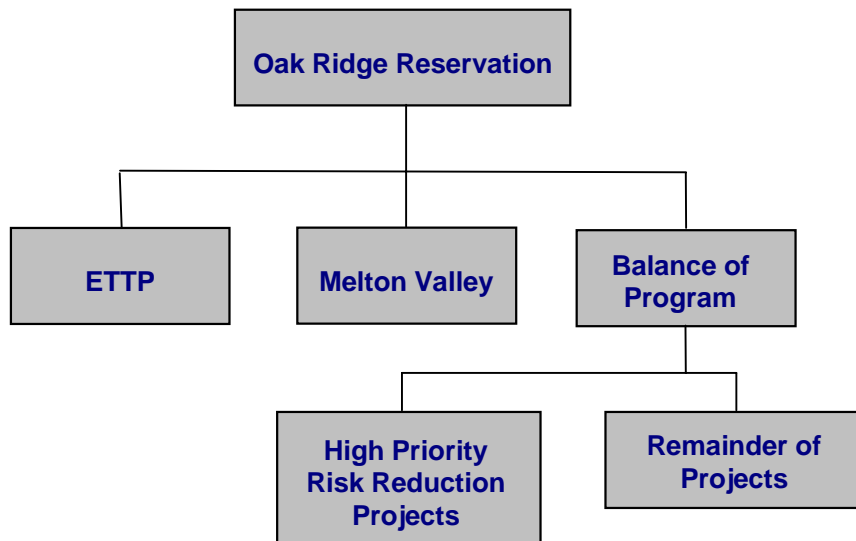
The schedule logic, using the prioritization framework, focuses on the high risk reduction activities and completes the highest risk projects as soon as possible (priorities 1-3). In parallel, we must also reduce the high mortgage cost by closing ETTP (priority 4) to make funding available to accelerate completion of the balance of the program (priorities 5-13).

The following overall schedule compares the accelerated plan with the existing plan. The overall cleanup schedule reflects the strategy described above and the resulting acceleration.



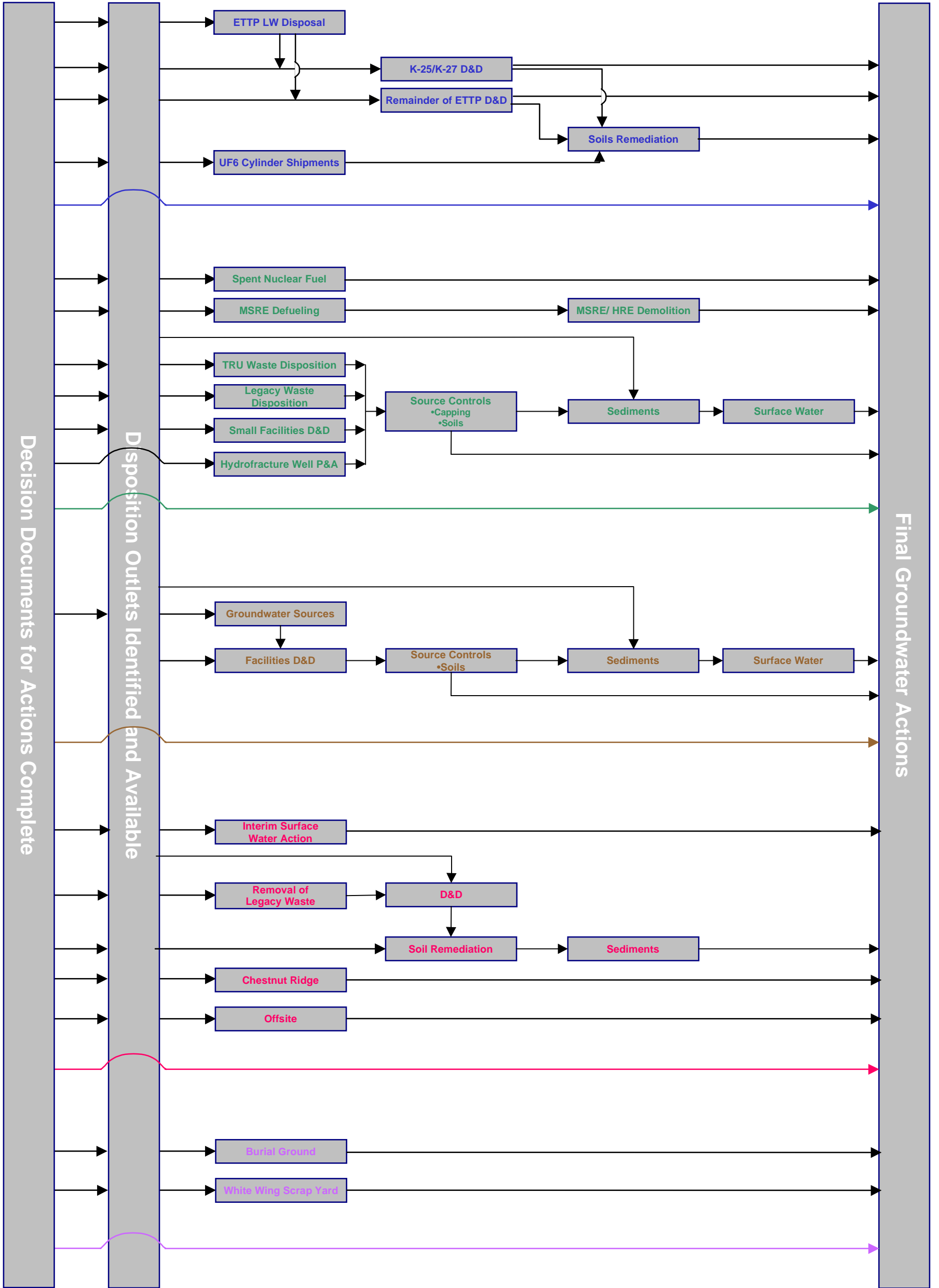
Oak Ridge Reservation Accelerated Cleanup Schedule

The execution of the work is organized as shown below in the summary work breakdown structure. Work at Melton Valley and ETPP are managed as the top-priority projects to be complete by 2008. In addition, there is the Balance of Program work that contains two major project groupings—high priority risk reduction projects that will be completed by 2008 and the remainder of the projects to be completed by 2015. The majority of these projects are located in the main plant areas of Y-12 and ORNL and will be integrated with the long-term modernization and revitalization plans at those sites.



Oak Ridge Reservation Work Breakdown Structure

The critical path logic used for scheduling the work is shown on the following page. A detailed critical path schedule will be developed as part of the Lifecycle Baseline update. A preliminary schedule showing major subprojects and precedence relationships is shown in Appendix C.



- A East Tennessee Technology Park
- A UEFPC
- A Bethel Valley
- A Bear Creek Valley
- A Melton Valley

Critical Path Logic

Having established the risk-based prioritization for the work, we assembled a number of substantive changes to our work practices that will facilitate the work execution. These changes include lessons learned from other EM closure sites, technical approaches already reflected in Oak Ridge records of decision, and technical and management innovations developed during the work planning process. These can be categorized as either improved work flow or alternative technical approaches, and we consider these to be enabling innovations for our accelerated plan.

Improved Work Flows

- Restructure reindustrialization program so that the ETTP site demolition schedule establishes the date for title transfer decisions.
- Consolidate Melton Valley capping contracts to achieve project execution efficiencies including utilization of existing cap designs.
- Return responsibility for newly generated waste treatment and disposal to Office of Science and National Nuclear Security Administration.
- Utilize an innovative procurement approach called a “reverse auction” which uses on-line software that allow remedial action contractors to bid against each other in real time.
- Develop a streamlined regulatory decision-making process to ensure early identification of issues and timely decision making to facilitate the acceleration of cleanup activities.
- Use a voluntary cleanup approach for the Witherspoon offsite cleanup projects which significantly reduces paperwork, accelerates field activities, and minimizes surveillance and maintenance costs. In this approach, DOE will cleanup the sites without obtaining formal regulatory approval in advance. Instead, informal agreement will be reached and final approval will be obtained when cleanup is completed to the agreed-upon levels.

Alternative Technical Approaches

- Obtain a treatment variance for the East Chestnut Ridge Waste Pile to eliminate the high cost of Resource Conservation and Recovery Act waste treatment and disposal.
- Dispose of ETTP enrichment converters directly instead of cutting up the converters prior to (this avoid the hazards of worker exposure and cutting operations).
- Excavate soils in Melton Valley to protect ecological and human receptors only if they exceed an agreed-upon level in the Melton Valley Record of Decision that can be measured in real time using field instrumentation.

In addition, we are considering the following innovations which will require further discussions with the regulators and stakeholders:

- Dispose of clean demolition debris in building basements versus disposal in the industrial landfill.
- Dispose of legacy low level waste that meets the waste acceptance criteria in the onsite disposal cell [Environmental Management Waste Management Facility (EMWMF)].
- Convert uranium hexafluoride (UF₆) cylinders at a commercial facility if DOE conversion facilities are not constructed in time to support ETTP closure.
- Stabilize and dispose Molten Salt Reactor Experiment fuel salt as waste instead of converting the uranium-233 for potential reuse.