CENTRAL PLATEAU REMEDIATION

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ABSTRACT

A systematic approach to closure planning is being implemented at the Hanford Site's Central Plateau to help achieve the goal of closure by the year 2035. The overall objective of Central Plateau remediation is to protect human health and the environment from the significant quantity of contaminated material that resulted from decades of plutonium production in support of our nation's defense. This goal will be achieved either by removing contaminants or placing the residual contaminated materials in a secure configuration that minimizes further migration to the groundwater and reduces the potential for inadvertent intrusion into contaminated sites.

The approach to Central Plateau cleanup used three key concepts – closure zones, closure elements, and closure process steps – to create an organized picture of actions required to complete remediation. These actions were merged with logic ties, constraints, and required resources to produce an integrated time-phased schedule and cost profile for Central Plateau closure. Programmatic risks associated with implementation of Central Plateau closure were identified and analyzed. Actions to mitigate the most significant risks are underway while high priority remediation projects continue to make progress.

INTRODUCTION

The Hanford Site, managed by the U.S. Department of Energy (DOE), is a 1518 square-kilometer (586 square-miles) site located in southeastern Washington State. The site was established in 1943 to support the weapons production complex and produced about 60 percent of the United States' plutonium inventory. The Central Plateau, occupying about 195 square-kilometers (75 square miles) at the heart of the site, served as the center for plutonium separations and finishing from the mid-1940s through the late 1980s.

The production mission resulted in the construction of hundreds of processing and support facilities along with the generation of large volumes of liquid and solid wastes. Since the conclusion of the production mission in 1989, the Hanford Site has focused on an environmental restoration mission. Nearly 4,000 individual significant items remain to be cleaned up within the Central Plateau. The large number of items and the complex nature of the cleanup present a daunting challenge. Large heavily contaminated processing and support facilities remain, along with liquid and solid waste handling, storage, and disposal facilities that present a potential threat

to human health and the environment. A comprehensive planning effort was recently undertaken by DOE and the prime contractor, Fluor Hanford (Fluor), focusing on closure of the Central Plateau.

PLAN FOR CENTRAL PLATEAU CLOSURE

In 2004, DOE's Richland Operations Office requested that Fluor develop an approach for defining the full scope of work required and quantifying the resources necessary to complete Central Plateau closure. The *Plan for Central Plateau Closure* (Plan) [1] documented this approach and organized Central Plateau cleanup using three key concepts – geographic closure zones, closure elements, and closure process steps. These concepts enabled a systematic approach to closure planning not previously used for the Central Plateau.

Closure Zones

The regional closure concept was first introduced in the *Performance Management Plan for Accelerated Cleanup of the Hanford Site* .[2] A follow-on planning activity, *Optimization Strategy for Central Plateau Closure* [3], defined closure zones in consultation with DOE Field offices, regulatory agencies, and contractors. Central Plateau planning encompasses 22 closure zones, organized around significant processing or waste management facilities. Figure 1 shows the relative location and size of the Central Plateau and closure zones.

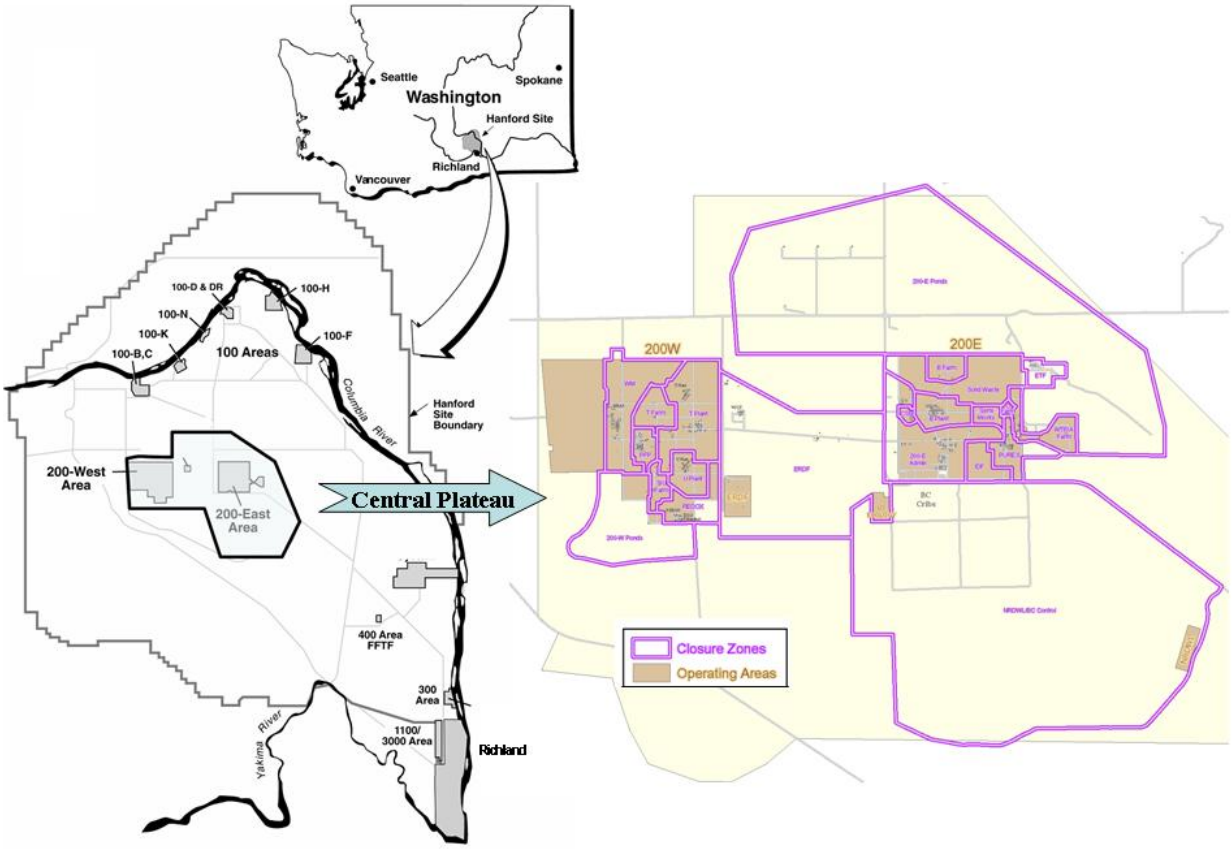

Fig. 1. Hanford's Central Plateau contains 22 closure zones.

Closure Elements

Within the closure zones, there are multiple processing and support facilities, tank systems, liquid and solid waste handling, storage, and disposal facilities, utility systems, and wells. Five closure elements were formulated to sort items requiring cleanup into logical groupings to enable consistent closure approaches, schedules, and cost estimation.

Canyons – Five large processing facilities were constructed to separate plutonium and uranium from spent fuel irradiated in the nine Hanford Site production reactors. Three identical canyons, B Plant, T Plant, and U Plant, were built in the 1940s, while the Reduction-Oxidation (REDOX) Canyon and the Plutonium-Uranium Extraction (PUREX) Plant were constructed in the 1950s. The canyon buildings range from approximately 180 to more than 300 meters long (600 – 1000 feet) and from about 22 meters to more than 30 meters high (75 – 100 feet.) Approximately one-third of each structure is below grade level for shielding purposes. Thick reinforced concrete walls, floors, and shielding blocks enclose process vessels, piping, and instrumentation. B Plant, U Plant, REDOX and PUREX are currently in the surveillance and maintenance (S&M) mode. Central Plateau closure planning includes all activities necessary to remediate these canyon facilities and the legacy equipment and materials inside. T Plant is the only canyon still active. It is currently used for waste treatment and repackaging operations. Deactivation activities will be conducted to remove excess materials and equipment at the conclusion of T Plant's operating mission. Central Plateau closure planning includes remediation of the T Plant canyon structure following deactivation. A Record of Decision for final disposition of the U Plant Canyon was issued in October 2005.[4] Pending work planning and funding availability, legacy materials and equipment will be placed inside the below-grade process cells. Void space will be filled to stabilize the material and prevent subsidence followed by demolition of the upper structure. Demolition debris will be left in place and an engineered surface barrier will be placed over the demolished structure and adjacent area.

Tanks – One hundred forty nine single-shell tanks and 28 double-shell tanks have been used for storage of predominantly high activity liquid waste generated during reprocessing operations. Tank capacity ranges from nominally 200 cubic meters to 3800 cubic meters (55,000 to 1,000,000 gallons.) All 177 tanks are underground. Tank waste is currently being retrieved from single-shell tanks and transferred to the more robust double-shell tanks. Central Plateau closure planning includes closure activities for the emptied tanks and ancillary systems as well as integration with other cleanup activities. DOE's Office of River Protection is responsible for retrieval of waste from both single-shell and double-shell tanks and stabilization in a waste form suitable for permanent disposal.

Waste Sites – More than 800 waste sites remain on the Central Plateau requiring cleanup. The waste site inventory includes liquid and solid waste handling, storage and disposal sites, as well as unplanned release sites. An estimated 1.7 billion cubic meters (450 billion gallons) of liquid effluent were discharged into the soil using cribs, ponds, ditches, drains, tile fields, and injection wells. Some liquid discharge sites contain radionuclide and chemical contamination from the earth's surface to the groundwater approximately 75-90 meters (250-300 feet) below. Other liquid waste discharge sites contain only shallow contamination, while still others have contaminants at different levels within the vadose zone. Liquid waste discharge sites range from large ponds covering 20 hectares (50 acres) to small unplanned releases covering a few square meters. Solid waste sites range from large radioactive, mixed, or industrial waste burial grounds to small debris piles left behind after construction activities. The waste site closure element

includes more than 100 unplanned release sites resulting from spills or leaks of radioactive materials and/or hazardous substances. Central Plateau closure planning encompasses remediation of all these waste sites, as well as integration with groundwater remediation activities, tank closure planning and canyon/structure remediation. A final decision on disposition of 33 waste sites within the U Plant Zone is nearing completion. This will be the first Record of Decision for disposition of soil waste sites on the Central Plateau.

Structures – Nearly 1000 structures have been constructed on the Central Plateau. These include complex processing facilities, such as the Plutonium Finishing Plant, tank waste evaporators, and plutonium concentration facilities as well as slightly contaminated or clean structures such as storage facilities, change rooms, sampling stations, warehouses, shops, and offices. Many of these structures are no longer in use and are awaiting final disposition, while others are still in operation. Central Plateau closure planning includes final disposition of structures currently in surveillance and maintenance and final disposition of currently active structures following deactivation. Seventeen Central Plateau structures were demolished in fiscal year 2005. Planning is underway to proceed with additional structure removal pending disposition decisions.

Wells – Nearly 2000 wells have been drilled on the Central Plateau for groundwater and vadose zone monitoring or sampling; these will no longer be required after closure activities. Central Plateau closure planning includes integrated well decommissioning to ensure that pathways to the groundwater are sealed to reduce the potential for contaminant migration to the groundwater.

Closure Process Steps

To standardize planning, a series of closure process steps were identified that cover the full range of activities required to complete remediation of the Central Plateau. These steps, shown in Figure 2, form the basis for scope, schedule, and cost templates applied to each item within each closure element. An integrated resource-loaded schedule was developed accounting for each of the 4,000 significant items requiring closure as well as common or cross-cutting elements, such as project management, infrastructure removal and relocation, etc. Logical connections and predecessor/successor relationships between process steps and closure elements/items were defined. This resulted in a realistic representation of the full scope of closure actions and a mechanism to more clearly communicate the magnitude of the effort associated with Central Plateau closure.

PATH FORWARD

The integrated schedule highlighted potential risks associated with implementation of Central Plateau closure planning and areas where opportunities are available for substantial improvement in cost, schedule, or resource utilization. The primary programmatic risks to meeting the Central Plateau closure cost and schedule goals were identified as: (1) final disposition decisions differing significantly from those assumed in the schedule; (2) logistical complexities associated with large-scale movement of materials for void fill and barrier construction; (3) delays caused by restrictions on movement of materials intended for disposition offsite, e.g. stabilized plutonium, spent nuclear fuels, and vitrified tank wastes; and (4) availability of funding due to competing site and national priorities.

While risks related to offsite shipment restrictions and funding availability are generally beyond the control of Central Plateau closure planning, risks associated with disposition decisions and logistical issues can be mitigated by near term actions. Since the Plan was completed in September 2004, DOE and Fluor have taken action in those areas.

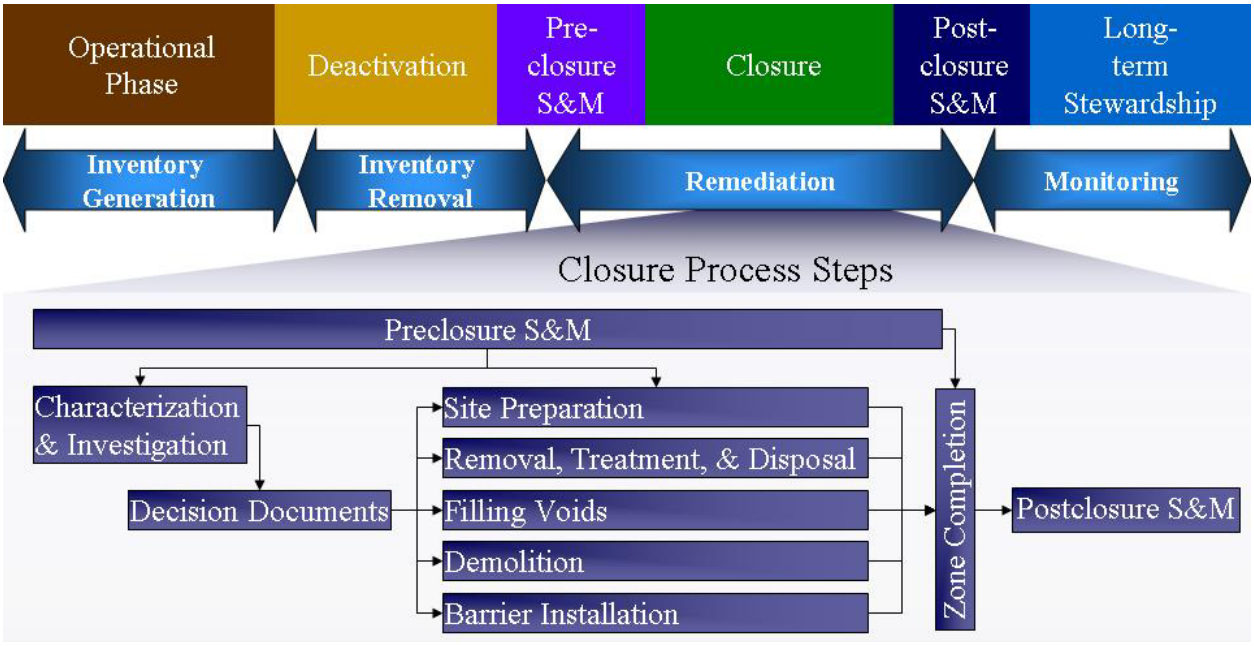

Fig. 2. Closure process steps aided development of an integrated resource-loaded schedule.

Disposition Decisions

Most Central Plateau closure actions are authorized and documented using the following key regulations:

- the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) [5];
- the Resource Conservation and Recovery Act (RCRA) [6]; or
- the *Atomic Energy Act of 1954* (AEA) [7], as amended with review as applicable under the *National Environmental Policy Act* (NEPA) [8].

The Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) [9] defines an overarching action plan for compliance with RCRA and CERCLA requirements. The fundamental principles guiding the development of decision strategies are to ensure that the disposition approaches protect public and worker health and the environment, provide for stakeholder involvement, achieve risk reduction without unwarranted delay, and increase the levels of regulatory agency involvement as the level of hazard and stakeholder interest increases. The strategy for achieving disposition decisions in accordance with the Tri-Party Agreement for three of the five closure elements has been the focus of recent actions.

Facility Binning – For the canyon facilities and other structures still requiring disposition decisions, the Tri-Party Agreement agencies – DOE, the U.S. Environmental Protection Agency (EPA) and the State of Washington Department of Ecology (Ecology) – chartered a team of agency and contractor staff to define the process for disposition of all Central Plateau facilities and gain agreement on the path forward for reaching disposition decisions. This activity, known as facility binning, categorizes structures in "bins" to optimize resources applied to reaching disposition decisions, identifies a specific regulatory path for each facility bin, and provides a mechanism to gain Tri-Party Agreement agency concurrence on the path forward and the extent of agency involvement.

Disposition decisions for most Central Plateau facilities contaminated with radioactive materials or other hazardous substances will be made using the CERCLA process in accordance with the joint DOE-EPA *Policy on Decommissioning DOE Facilities Under CERCLA*.[10] In most structures where the presence of radionuclides and other CERCLA hazardous substances poses a substantial threat of release and a response action is necessary to protect human health and the environment, a non-time critical removal action is deemed to be an appropriate response action under the Joint Policy. Some complex structures, such as canyon facilities, will use the more comprehensive CERCLA remedial action process instead. Where no threat of release exists, disposition decisions will be made using NEPA processes for evaluation of federal actions. Some Central Plateau facilities contain RCRA treatment, storage, and disposal units. In some cases, closure of the RCRA unit will accomplish complete disposition of the structure. In other cases, closure of a RCRA unit within a structure will be integrated with CERCLA processes for disposition of the remainder of the structure.

Waste Site Decision Strategy – Prior to the development of the Plan, waste site decision documents had been proceeding down a path that utilized process-based operable units (OUs) to group remediation decisions by the source of the waste being discharged to the site. The resulting alternative evaluation documents proved to be inadequate to allow for comprehensive decisions on remedial actions for some OUs. The potential for delays and rework associated with these decisions represented substantial programmatic risk to achieving timely Central Plateau closure. The Tri-Party Agreement agencies are utilizing a collaborative effort to evaluate issues and concerns within the decision-making process.

This effort refocuses future remedial investigation (RI) activities using decision model groups for those sites not suitable to the OU grouping to take advantage of lessons learned in previous RI activities. The model group concept considers the physical similarities of the waste sites more than the source of the waste discharged to the site. This will result in waste site model groups that have like characteristics, are likely to utilize similar methods for characterization and investigation, and would be expected to respond similarly in alternative evaluations. In the early stages of this collaborative effort, a DOE/Fluor team worked with representatives from EPA, Ecology, other site contractors, and the State of Oregon to reach agreement on (1) the description and criteria for discrete model groups and (2) the categorization of each waste site into the appropriate model group. Some model group sites that are expected to have a straightforward decision may move on an accelerated path through the feasibility study and decision-making process to enable remediation work to continue while other, more complex, decisions are being made.

Risk Management in the Decision-Making Process – The Tri-Party Agreement agencies established a risk framework to define key parameters that strongly influence risk assessment and, consequently, decision-making. The agencies documented the risk framework in a response to advice from the Hanford Advisory Board in 2002.[11] Application and implementation of risk framework parameters has resulted in several issues that must be addressed to enable decisions to be made on the more complex Central Plateau waste sites. DOE and Fluor are managing risk associated with the decision parameters by exploring and investigating opportunities to validate assumptions being used in the decision process. Critical parameters and associated issues are identified in the following sections.

Land use – Potential future land uses define the appropriate exposure scenarios to be used in risk analysis. DOE has the responsibility for land use planning for the Hanford Site and documented the results of an interactive planning process in the *Hanford Comprehensive Land Use Plan Environmental Impact Statement* [12] and Record of Decision.[13] The Central Plateau is currently assumed to be used for industrial-exclusive purposes, meaning any uses would be compatible with the current DOE mission of environmental restoration and waste management. Under this assumption, risk analyses can take credit for restrictions associated with that use, such as controls on access, excavation, surface disturbances, vegetation, drilling, and groundwater use. The issue impacting current decision-making relates to how long industrial use will be maintained. It is generally accepted by the regulatory agencies and stakeholders that industrial-exclusive use is appropriate for the expected operating period (approximately 50 years) and that the land can be restricted for other industrial uses for an additional 100 years. However, the concern over the viability of the active institutional controls necessary to enforce restrictions beyond 150 years raises questions about the appropriateness of using only industrial use-based exposure scenarios in risk analysis for decision-making. Additionally, as restrictions in future land use decrease, the tolerance for uncertainty in sampling and characterization strategies also diminishes. Accordingly, investigation activities could become more complex, lengthy, and costly.

Institutional controls – Institutional controls are defined as non-engineered restrictions on activities, access, or exposure to land, groundwater, surface water, waste disposal areas, and contaminated media. They can include procedural access controls, fencing, warning notices, and property controls such as deed restrictions. Institutional controls can be applied at a waste site as part of or following implementation of the selected remedy. The selection of institutional controls has not been standardized on the Hanford Site, so various projects apply different institutional controls. Risk analysis and remedy selection are strongly influenced by the type of control that is considered viable. For example, federal control of the Central Plateau can be considered an institutional control by providing an affirmative means of ensuring access and use restrictions are enforced. However, the length of time assumed for federal control drives the point at which other exposure scenarios, such as inadvertent intrusion, should be considered.

Core zone – The Tri-Party Agreement agencies designated a "core zone" for industrial-exclusive use for the purpose of risk assessment as part of the risk framework parameters. The exact nature of the core zone and treatment of waste sites inside the core zone and near the boundaries is currently at issue. Designation of the core zone did not address the question of whether the size of the core zone should shrink over time nor did it consider whether waste sites near the core zone boundary should be evaluated differently because of

potential impact on human health and the environment outside the boundary. Additionally, resolution of the core zone question must also consider the appropriate decision unit for making the most effective and beneficial decisions (e.g. individual waste sites, operable units, model groups, or geographic areas.)

Points of compliance – The size and configuration of the decision unit directly influences the points at which compliance with cleanup standards is measured. Because groundwater is typically 75-90 meters (250-300 feet) below ground surface on the Central Plateau, the extent of soil remediation required is highly dependent on where the point of compliance for the groundwater remediation goal is measured. Currently, CERCLA risk analysis for the Hanford Site assumes that the point of compliance is the intersection of the groundwater and a vertical line drawn at the edge of the waste site. This does not take into account other contamination sources in the area, lateral spreading that may occur as contaminants move through the vadose zone, or mixing that will occur when contaminants arrive at the saturated zone. The decision strategy needs to evaluate waste site remediation as part of an integrated system and apply the point of compliance that is appropriate for the geographic situation, including consideration of the relationship with other contaminant plumes in the area.

Postulated inadvertent intrusion – Intruder scenarios are evaluated to assess the protectiveness of remedies in the event of loss of institutional controls. Because the Central Plateau is expected to be under long-term federal control, the probability of inadvertent intrusion into contaminated media is low. However, the Tri-Party Agreement agencies agreed to consider impacts to a postulated inadvertent intruder as part of the risk framework parameters. Risk assessments conducted for various projects on the Hanford Site use differing methods and assumptions for calculating risk to the inadvertent intruder.

Actions – Collaborative efforts are continuing to further define key decision parameters and to resolve the uncertainties affecting disposition decisions. DOE and Fluor are actively engaging the regulatory agencies and stakeholders to close the open items that have a significant influence on risk analysis and, therefore, investigation and remedy selection, including:

- Should risk analysis for waste sites near the core zone boundary consider potential exposure scenarios consistent with land uses outside the boundary?
- What are the fundamental characteristics of institutional controls, such as:
  - What constitutes a control, e.g. federal ownership, posted warning notices, physical barrier (e.g. fences), deed restrictions, etc?
  - What time frame is appropriate to distinguish between active control, where inadvertent intrusion is not considered credible, and passive control, where intrusion should be considered?
- Is a buffer zone needed around the core zone and if so, what appropriate institutional controls can be developed for such an area?
- What is an appropriate decision unit?
- What points of compliance should be used to establish remediation goals that are protective of groundwater while accounting for other activities on the Central Plateau?

- What is the appropriate role of intruder risk in the decision-making process?
- What are characteristics of intruder scenarios to be evaluated, such as:
  - What standard intruder scenarios should be evaluated (well driller, trencher, rural resident, etc.)?
  - What input parameters should be used to calculate contaminants available to the intruder (well diameter, depth or trench, size of garden, etc.)?
  - What time frames (e.g. post-150 years) should be assumed for intrusion?

Part of the decision strategy for the Central Plateau is to move forward with remediation in selected areas to test the key assumptions and evaluate the effectiveness of potential solutions. This is most evident in the actions being taken by DOE and Fluor to proceed with the prototype U Plant zone closure.

Prototype Implementation in the U Plant Zone – The U Plant zone, located in the southwest portion of the Central Plateau, is inactive and ready for cleanup, remediation decisions have already been made or are nearing completion, and the zone contains a representative cross-section of closure elements and types of cleanup actions expected to be required in other zones. One CERCLA Record of Decision, for the U Plant Canyon, was received in October 2005 [4] and a second, for the 200-UW-1 Operable Unit covering U Plant waste sites, is expected to be completed in early 2006. The selected remedy for the U Plant Canyon will result in the treatment and encapsulation of wastes within the grouted, reinforced-concrete structure of the canyon. The structure will then be covered by a protective engineered barrier. The U Plant waste sites include 31 sites that require a remedial response. The expected remedy is a combination of no action; removal, treatment, and disposal; monitored natural attenuation; and containment with an engineered surface barrier. The specific remedy for each site is dependent on the nature and extent of the contamination and the characteristics of the waste site. The Tri-Party Agreement agencies have agreed to proceed with issuance of the Records of Decision to move ahead with U Plant zone remediation. The key decision parameters have been addressed as described below in the U Plant Canyon ROD [4] and in discussions among the Tri-Party Agreement agencies for the U Plant Waste Sites ROD. DOE and the regulatory agencies will evaluate the appropriateness and effectiveness of these decisions after implementation, resulting in lessons learned to be applied to the remainder of Central Plateau remediation activities.

Land use – The reasonably anticipated future land use for the U Plant Zone is continued Industrial Exclusive activities for at least 50 years, followed by industrial use (e.g. non DOE worker) for the foreseeable future. Land and groundwater use will be restricted to industrial uses indefinitely because the residual contamination remaining after remediation is not expected to allow unrestricted use. DOE is responsible for maintaining land use controls, even if procedural responsibility for these activities is transferred to another party.

Institutional controls – Institutional controls include access controls, recording of residual contamination in deed notices, maintenance of surface barriers, and restrictions or prohibitions on irrigation, well drilling, groundwater use, intrusive work, and any activities that would disrupt the surface barriers or monitoring systems. Adequate control of the site and knowledge of the hazards is assumed to continue for at least 150 years. After that period, there is a higher probability that institutional control could lapse and the risk of a postulated inadvertent intruder increases.

Core zone – The U Plant Canyon and U Plant zone waste sites are inside the core zone and more than 600 meters (2000 feet) from the conceptual core zone boundary. Therefore, remediation decisions did not consider the proximity of a potential non-industrial use area. The decision units selected for the U Plant zone are based on individual elements, such as the U Plant canyon building and individual waste sites.

Point of compliance – For the U Plant Canyon, the point of compliance for groundwater protection will be established during the remedial design phase to coordinate the engineered surface barrier design with groundwater monitoring requirements for U Plant zone waste sites and groundwater remediation projects. Development of the groundwater monitoring network for the U Plant zone waste sites will consider evaluation points for cleanup standards described in the Feasibility Study [14] and will be documented in an Operations and Maintenance Plan to be developed.

Postulated inadvertent intrusion – The postulated inadvertent intrusion model assumes the loss of institutional controls and resulting exposure to the inadvertent intruders that may be able to freely access the site. For the U Plant Canyon, impacts to the postulated inadvertent intruder were assumed to be bounded by a residential exposure scenario. Residents are assumed to live and raise and consume crops and livestock on or adjacent to the remediated structure. The intruder also drinks groundwater, irrigates crops and waters livestock from an adjacent well. Cleanup at the U Plant Canyon is based on the assumption that the selected remedy effectively isolates contaminants and severing exposure pathways. As a result, there are no unacceptable risks for the postulated inadvertent intruder from the U Plant Canyon. For the U Plant zone waste sites, the potential risks to the postulated inadvertent intruder were evaluated for a construction trench worker, a well driller, and a rural resident. The combination of remedies for the 31 waste sites provides the best balance of tradeoffs among the alternatives for each of the sites. The goal of the remedies is to limit exposure by severing exposure pathways wherever possible. This provides overall protection of human health and the environment, including postulated inadvertent intruders.

In the spirit of moving forward to gain valuable implementation experience, DOE has agreed to the exploratory solutions to the decision strategy issues that are specific to the U Plant zone only at this time. DOE and Fluor will continue to evaluate these solutions while working with the regulatory agencies to formulate a final decision strategy.

Logistical Issues

The significant logistical issue identified in the Plan for Central Plateau Closure involved the procurement, transport, and staging of the large volume of materials necessary to implement selected remedies. This includes soil, grout or other materials to be used for void filling below ground structures and waste sites, either to stabilize the site and prevent subsidence or to restore the surface after significant volumes of waste have been removed for treatment and disposal elsewhere. This will also include soils, gravel, sand, or other materials brought in to construct engineered barriers where that remedy is selected. Remedies at the U Plant Zone include both significant void fill and barrier construction. Lessons-learned during the near term remediation activities at the U Plant Zone will aid DOE and Fluor in addressing logistical issues and applying these lessons learned to other Central Plateau closure actions. Additional information on U Plant Zone activities is contained in *U Plant Geographic Area Closure Prototype*.[15]

SUMMARY AND CONCLUSIONS

The approach documented in the Plan for Central Plateau Closure defines the full scope of work required and quantifies the resources necessary to complete Central Plateau closure. Since initial development of the Plan, DOE and Fluor have begun to realize the benefits of the overall integrated approach. The Plan organized Central Plateau cleanup using three key concepts – closure zones, closure elements, and closure process steps. These concepts enabled a systematic approach to closure planning not previously used for the Central Plateau. Twenty-two closure zones were identified, organized around significant processing or waste management facilities. Five closure elements – canyons, tanks, waste sites, structures and wells – were formulated to sort items requiring cleanup into logical groupings to enable consistent closure approaches, schedules, and cost estimation. Standard closure process steps were identified that cover the full range of activities required to complete remediation of the Central Plateau. This enabled Fluor to develop a realistic representation of the full scope of closure actions and to more clearly communicate the magnitude of the effort associated with Central Plateau's closure.

The integrated schedule highlighted potential risks associated with implementation of Central Plateau closure planning. Key risk areas associated with disposition decisions and logistical issues are being addressed by near term actions. The facility binning process is a collaborative effort among the Tri-Party Agreement agencies to gain consensus on the path forward for disposition of remaining Central Plateau structures and clear the way for timely processing of facility disposition decisions. A similar process for waste sites is underway to evaluate issues and concerns within the waste site decision-making process. The Tri-Party Agreement agencies' support for a revised path forward will result in improved decision-making for waste sites. DOE and Fluor are moving forward with the prototype U Plant zone closure activities to demonstrate and refine methods for remediation on the Central Plateau and achieve risk reduction while mitigating programmatic risks.

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