

General

Janice

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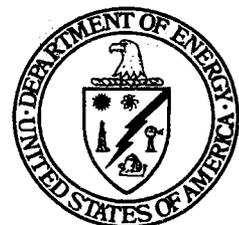
U.S. Department of Energy
Albuquerque Operations Office

***Environmental Management
Ten Year Plan
Summary***

August 1996



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ENVIRONMENTAL MANAGEMENT TEN YEAR PLAN SUMMARY

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Executive Summary

Why a Ten Year Plan?

The DOE Albuquerque Operations Office (AL) is pleased to support Assistant Secretary for Environmental Management Al Alm in the development of the DOE Environmental Management Ten Year Plan. The Plan introduces a ten year vision to complete clean-up at most DOE sites by fiscal year (FY) 2006. At a small number of sites nationwide, treatment will continue for the few remaining waste streams. This unifying vision will drive budget decisions, sequencing of projects, and actions taken to meet program objectives. DOE's Office of Environmental Management (EM) will implement this vision in collaboration with regulators and stakeholders.

DOE AL's Ten Year Plan is one of 12 Plans being developed at DOE Operations and Field Offices. The AL Plan will be updated after stakeholder and DOE Headquarters comments are received, and a final version will be issued in the Fall of 1996. At the same time, a Ten Year Plan that addresses cross-cutting issues at all sites is being developed by the DOE Headquarters EM Program.

The ten year vision and associated Plan were created as a management challenge to get the job done as quickly as possible. Billions of dollars in mortgage and support costs nationwide are expected to be saved, and risks will be reduced faster. The vision and Plan also provide a rational basis for continued funding of the Environmental Management Program, of vital importance at a time when budgets are severely constrained and future funding levels are uncertain.

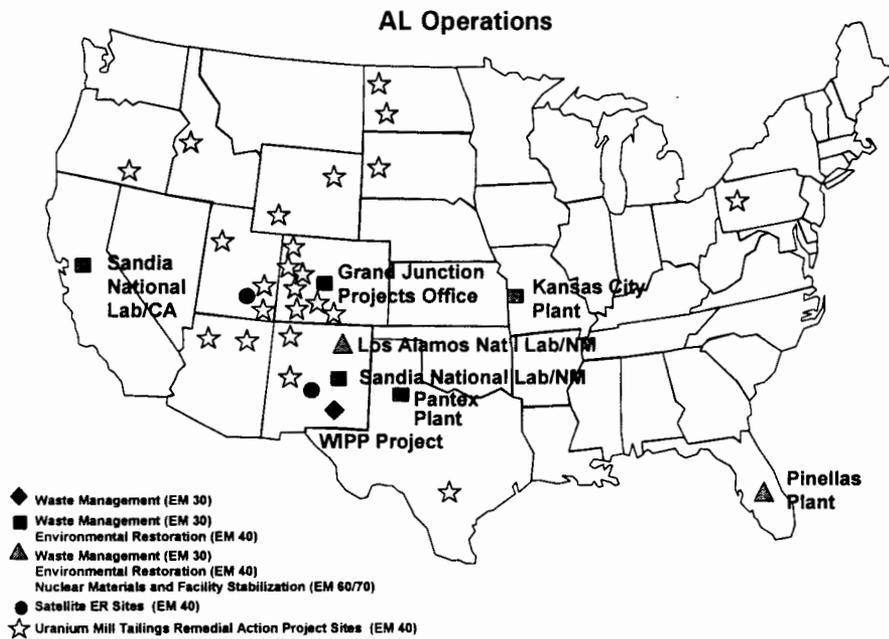
The DOE AL Ten Year Plan demonstrates that all clean-up activities and the work-off of legacy waste can be completed within the ten year window. As we increase our efficiency, we will continue to look for ways to reduce our costs and we are confident that DOE AL can accomplish its work with fewer dollars than allocated by DOE Headquarters for the development of the Ten Year Plan.



Introduction

This document provides a summary of the first draft of the DOE Albuquerque Operations Office (AL) Ten Year Plan (Plan). Addressed in this summary are programs within the AL Environmental Management (EM) Program, including environmental restoration, waste management, and facility transition/safe shutdown programs, as well as several programs with national significance. [Note: The Waste Isolation Pilot Plant will be addressed in the Carlsbad Area Office Ten Year Plan.] Program sites in New Mexico include Los Alamos National Laboratory, Sandia National Laboratories (including SNL/CA), the Inhalation Toxicology and Research Institute, and the South Valley Superfund Site; the Kansas City Plant in Missouri; the Pantex Plant in Texas; the Pinellas Plant in Florida; 24 Uranium Mill Tailings Remedial Action sites nationwide; and the Grand Junction Projects Office in Colorado (Figure 1).

Figure 1



As we develop the AL Plan, our goal is to maximize stakeholder involvement. After revising the Plan to reflect stakeholder and DOE Headquarters comments, we will meet with stakeholders to discuss the final version. Envisioned as a living document which will serve as a blueprint for the AL EM Program, the Plan will be revised as necessary to reflect significant changes in conditions and base assumptions. The Plan is available at each Albuquerque site Area Office or by contacting your local DOE Public Affairs Office.

Guiding the Plan is a ten year vision to complete the majority of environmental clean-up at DOE sites by fiscal year (FY) 2006. At a small number of sites nationwide, treatment will continue for the few



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remaining waste streams. This vision will drive budget decisions, sequencing of projects, and actions taken to meet program objectives. The Plan itself will provide the details of how DOE will accomplish this vision, which is supported by the following seven principles.

1. Eliminate the most urgent risks.
2. Reduce mortgage and support costs to free up funds for further risk reduction.
3. Protect worker health and safety.
4. Reduce the generation of waste.
5. Create a collaborative relationship between DOE and its regulators and stakeholders.
6. Focus technology development on cost and risk reduction.
7. Integrate waste treatment and disposal across sites.

The vision is intended to be simple, clear, and easily understandable. To ensure that there is no confusion, two terms used in the vision should be clarified:

- ▶ "Complete clean-up" means that land, facilities, and materials are adequately safe to be available for alternative use, based on future land use policy decisions, with a minimum cost for long-term surveillance and maintenance. Facilities where only surveillance and maintenance are to be performed, or where remedies such as groundwater pump and treat operations are installed and operational, or where the Government will retain storage obligations, are considered to be complete for this purpose.
- ▶ "Remaining waste streams" include high-level and transuranic (TRU) waste within the national DOE complex.

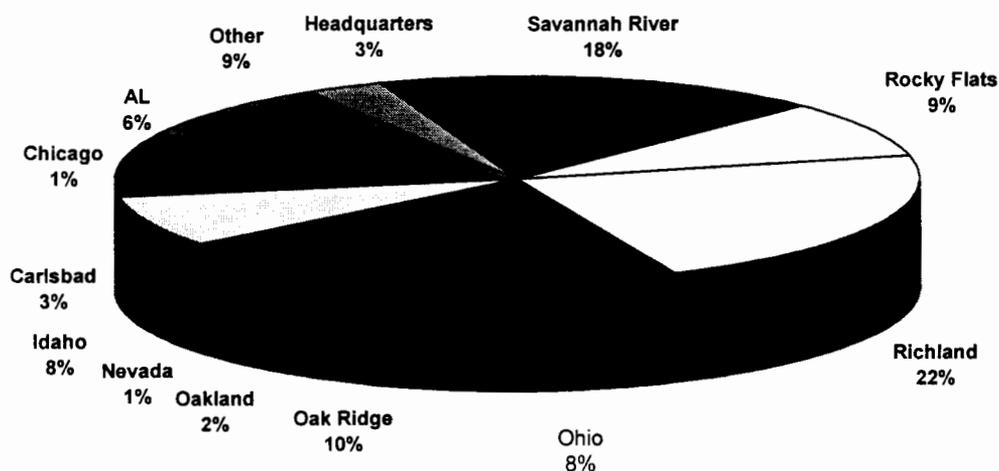


Background

DOE AL is one of 12 DOE sites nationwide that are preparing Ten Year Plans. Our budget is equal to approximately 6 percent of the national EM budget (Figure 2). Since 1994, AL has made significant progress in streamlining its EM programs and in bringing down costs. Environmental restoration clean-ups have been accelerated at the Los Alamos, Sandia, and Pantex sites through the use of Facility Action Plans, which have shifted the emphasis of the Environmental Restoration Program from assessments to actual clean-ups. Not only have the Facility Action Plans resulted in an increase in the number of actual clean-ups performed, but the total estimated cost has been reduced by \$2.5 billion, and the completion schedule has been shortened by ten years. The Pinellas Plant is on track for completing transfer in FY 1997 to the commercial sector. Similarly, the surface phase of the Uranium Mill Tailings Remedial Action (UMTRA) Project will be completed in FY 1998. The waste minimization program has reduced the generation of hazardous and radioactive wastes and has provided incentives for waste minimization at multi-program sites. It is expected that responsibility for waste treatment, storage, and disposal will be assigned to the DOE program generating the waste. This should encourage more accountability for waste generation and encourage waste reduction activities. Finally, AL has added Federal personnel to increase our accountability and oversight, and we have worked to optimize our resources and increase efficiency. As a result, most of the DOE AL Environmental Management activities already meet the Ten Year Plan goals and only minor adjustments are necessary. Nevertheless, we remain committed to identifying and implementing cost reductions and further improvements to work processes.

Figure 2

National Environmental Management Ten Year Plan Funding Allocation % of Total





Planning Assumptions

The DOE AL Ten Year Plan contains several general assumptions that were required by DOE Headquarters to assure consistency across all Operations and Field Office Plans. Additionally, several site-specific assumptions are presented in each detailed AL site description. The general assumptions used in the development of the DOE Albuquerque Plan are as follows.

- ▶ Using FY 1998 planning targets as a base through 2006, budgets will remain level.
 - Flexibility will exist to utilize the Uranium Mill Tailings Remedial Action funding amount, as it becomes available, to support the continued acceleration of other DOE Albuquerque specific environmental management activities. Flexibility will also exist to use funding as deemed appropriate and necessary (e.g. moving funding between programs, such as environmental restoration funding to waste management) will also be possible.
- ▶ The responsibility for funding all surveillance and maintenance costs for completed environmental restoration projects will be transferred to the installation landlord (Defense Programs) after FY 2006.
- ▶ Even as the legacy waste mission is completed, the sites at Sandia, Los Alamos, Kansas City, and Pantex will continue to generate waste from ongoing operations. Management of and financial responsibility for newly generated waste outside the EM Program is expected to be assumed by the generator program no later than FY 2000. However, funding and volume data are shown in the Ten Year Plan through FY 2006.

No new facilities (from Defense Programs, Energy Research, or other DOE programs) will be included for safe shutdown or remediation in the EM Program. The Plan will focus only on facilities currently included in the program. It should be noted, however, that DOE AL is responsible for several hundred excess Defense Programs facilities which are not currently in the EM Program. Many of these facilities will require further safe shut down and decontamination and decommissioning actions.

Adequate regulatory resources to support the accelerated schedule will be made available.

- ▶ Funding levels for Technology Development in the Plan will be provided by DOE Headquarters.



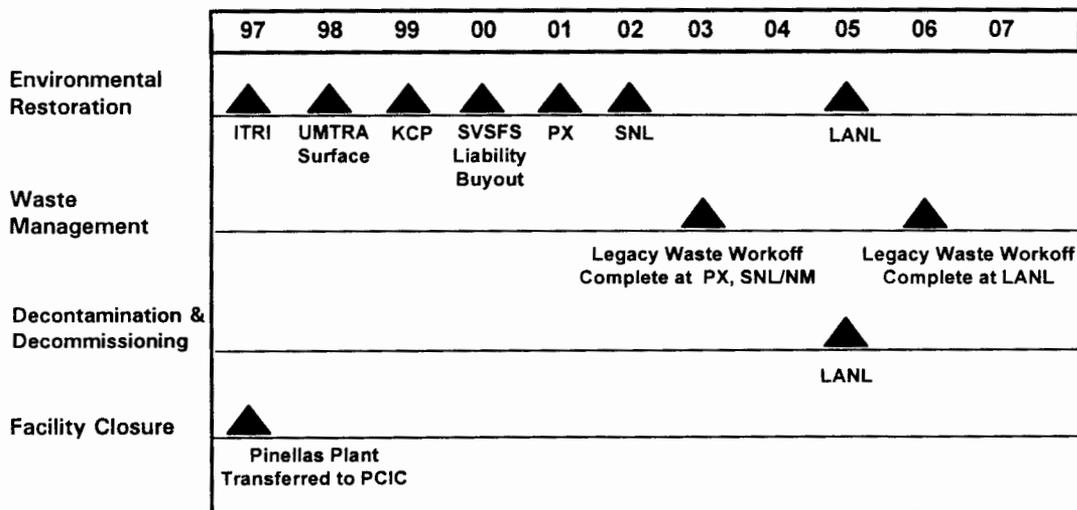
Relationship of the Ten Year Plan to Other Documents

DOE has developed several tools for preparing nationally integrated schedules and budgets for EM activities. The FY 1996 Baseline Environmental Management Report (BEMR) compiles, integrates, and analyzes life-cycle plans for all environmental management activities, given current practices and assumptions. The BEMR utilizes a seventy year timeframe and is based on the FY 1997 budget profile. The FY 1998 Activity Data Sheets (ADS) are based on a seven year window and include several budget profiles utilizing current assumptions and baselines for the Environmental Management Program.

The Ten Year Plan, on the other hand, is a challenge to the EM Program to complete as much clean-up as possible in the next ten years (Figure 3). Many of the same assumptions used in the BEMR and in the FY 1998 ADSs have been used in the DOE AL Ten Year Plan. However, the Plan funding profiles provide more funding in this ten year window to accelerate clean-ups than is assumed in the BEMR. This additional funding over the next ten years will save administrative and mortgage costs. The Plan also contains several assumptions that were not included in either the BEMR or the ADSs. These assumptions are described later in this document. In time, as national ten year planning is completed, we will be able to integrate our respective budget submittals, focus management attention on the major completion milestones, and formulate a contract for each site for completion of its respective environmental management missions.

Figure 3

AL Environmental Management Mission Completion



- ITRI - Inhalation Toxicology Research Institute
- KCP - Kansas City Plant
- LANL - Los Alamos National Laboratory
- PCIC - Pinellas County Industrial Council
- PX - Pantex Plant
- SNL - Sandia National Laboratories
- SVSFS - South Valley Superfund Site
- UMTRA - Uranium Mill Tailings Remedial Action



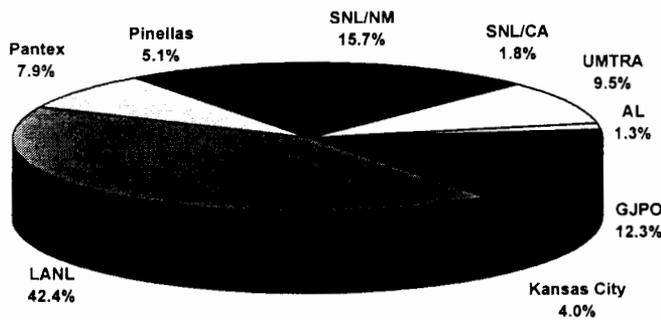
Ten Year Plan Budget

Funding levels shown in the Ten Year Plan have been specified by DOE Headquarters. For FY 1997, the AL Plan uses the FY 1997 Congressional request level of \$399.5 million. This includes funding for several national programs, in addition to DOE Albuquerque-specific EM programs. For FY 1998-2006, the available funding remains level at \$407 million, the amount shown in the FY 1998 ADSs. Again, this includes funding for some national programs in addition to DOE AL-specific EM programs (Figure 4). Detailed budget information is included in the Plan.

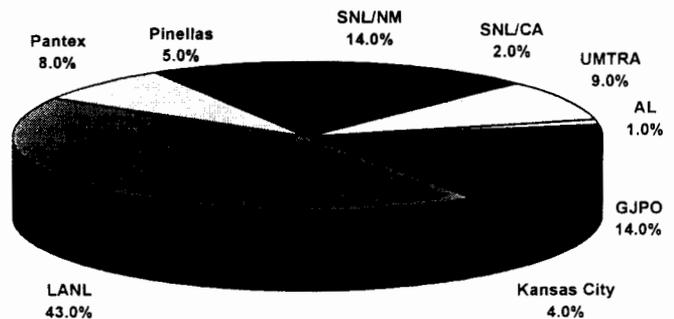
As with all government programs, available funding is a function of annual Congressional appropriations. The funding levels described in this Plan, which would allow clean-up to be completed at all DOE Albuquerque sites by 2006, may not be appropriated by Congress. If the specified funding levels are not received, the Ten Year Plan will have to be revised to account for any shortfall, and corresponding delays to scheduled work activities.

Figure 4

AL Environmental Management
 FY98 Activity Data Sheets Budget (Submitted)*
 Site % of Total



AL Environmental Management
 Ten Year Plan FY98 Budget*
 Site % of Total



*Does Not Include National Programs



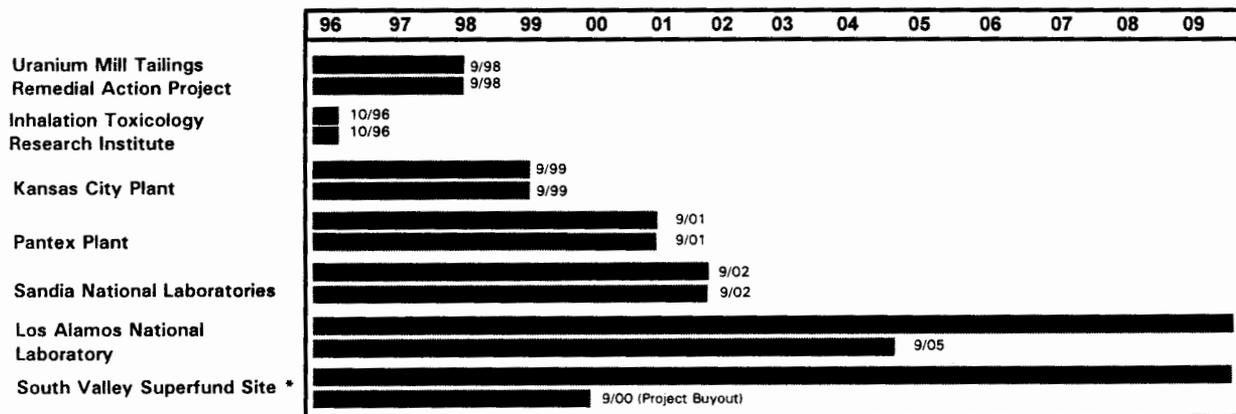
Programmatic Mission Completion

Environmental Restoration Program

The DOE Albuquerque Environmental Restoration (ER) Program includes all environmental restoration projects at Los Alamos National Laboratory, Sandia National Laboratories (New Mexico and California), Inhalation Toxicology Research Institute, Pantex Plant, Kansas City Plant, and the South Valley Superfund Site. The current goal of the ER Program is to complete all clean-up by fiscal year (FY) 2000 except for Sandia and Los Alamos National Laboratories (Figure 5). To date, the ER Program has completed in excess of 1,370 potential release sites (61 percent of total) (Figure 6). Potential release sites are areas where there is the possibility of contamination determined either through historical data or by visual or analytical observation.

Additionally, the Agreements-in-Principle between the Department of Energy and the States of Texas, Florida (FY 1997 and 1998 only), and Missouri are part of the Environmental Restoration Program. The Agreements-in-Principle cover technical and financial support for independent monitoring and oversight of DOE facilities by the states, community education, and radiological emergency response planning. The ER Program also provides financial support for the Innovative Treatment Remediation Demonstration (ITRD) activities that are conducted by a consortium of DOE, Environmental Protection Agency, and private industry. The purpose is to generate real world cost and technical performance data on innovative treatment technologies in the hope of promoting and accelerating their use nationwide. Sandia National Laboratories acts as the technical coordinator for the ITRD program.

Figure 5
**AL Environmental Clean-up Project
 Ten Year Plan vs. FY98 Activity Data Sheets (Submitted)**

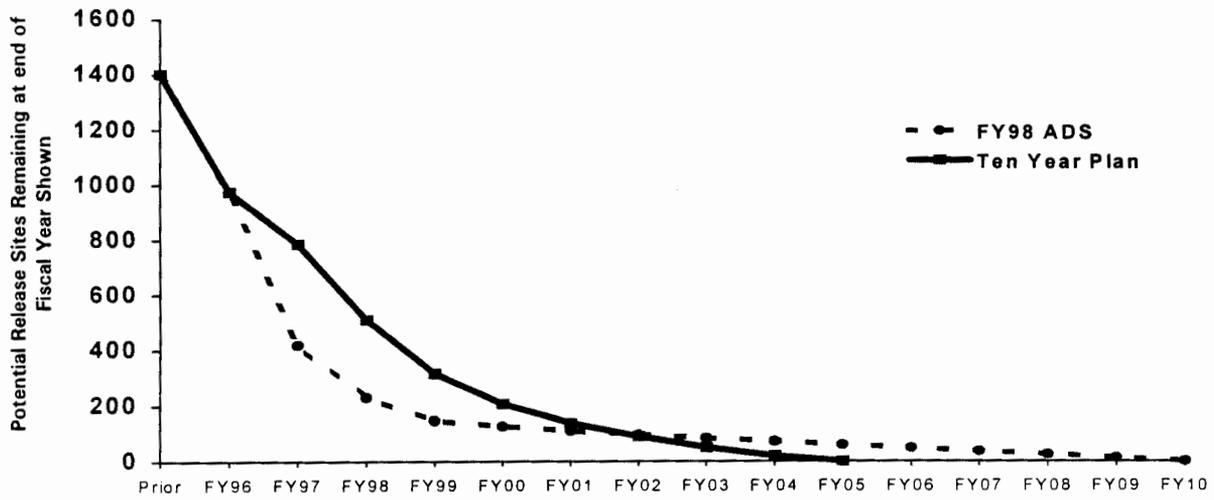


*Operation Of Groundwater Pump And Treatment System

■ FY 98 ADS Submittal
 ■ Ten Year Plan



Figure 6
AL Summary
Schedule Comparison Between Ten Year Plan
And FY98 Activity Data Sheets (Submitted)





Los Alamos National Laboratory

Project Work Scope Description

The Los Alamos National Laboratory (LANL) environmental restoration project is responsible for the clean-up of contaminated sites, and the decontamination and decommissioning of facilities used in earlier laboratory activities. Most of the contamination resulted from the installation and maintenance of residential and work-related infrastructure; some remediation is also required as the result of laboratory and testing operations. DOE and LANL, working with regulators and stakeholders, have negotiated a clean-up plan which will change as the result of the Ten Year Plan. Compared with the negotiated plan, the Ten Year Plan shortens the project's completion time by five years (completion in 2005 instead of 2010) (Figure 7). Acceleration of the schedule will not compromise public/worker health and safety, nor degrade the quality of environmental work. The revised schedule will be realized through the use of effective and streamlined regulatory approaches, as well as the application of innovative technologies and treatment processes. DOE realizes that there are fixed regulator staffing levels and that acceleration of the plan will increase work loads; therefore, DOE will work with the regulators to mitigate impacts on their constrained resources in accomplishing this plan.

Sites at LANL whose schedules and activities will be accelerated include the material disposal areas, where characterization is more involved due to the size of the site and the wide range of contaminants. Sites identified by the regulator for Corrective Measure Studies (CMS) will also be included.

Assumptions

- ▶ Efforts to work with the regulator to streamline the RCRA process will be successful in reducing the duration of regulatory review and number of Notices of Deficiency.
- ▶ In order to meet the goal of completion of the Environmental Restoration Program by FY 2005, LANL and DOE will need to work with the New Mexico Environment Department to ensure the streamlined approaches developed in the Document of Understanding, and the innovative concepts described in the EPA Advance Notice of Proposed Rule Making for RCRA Subpart (S), are considered during the negotiations for the new RCRA permit. *(Certain noted in plan)*
- ▶ The accelerated schedule for Los Alamos is based on a strategy for streamlining the characterization in the Canyons and modeling to determine the need for any further activities.
- ▶ The Ten Year Plan schedule was developed with the assumption that no additional Potential Release Sites (PRS) or facilities for decommissioning will be added to the scope of work between FY 1997 and FY 2006. Any new PRSs or facilities added to the work scope will have to be evaluated for schedule impacts and could potentially extend the clean-up completion date.



FY 2006 Project Status

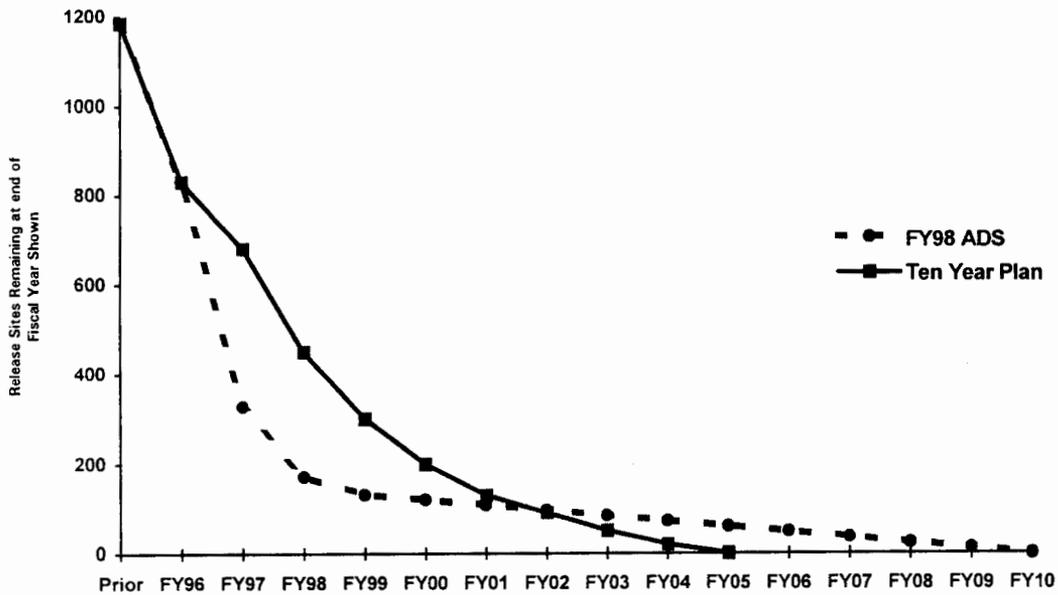
By FY 2005, all 2117 potential release sites at the Los Alamos National Laboratory will be addressed, including all material disposal areas, some landfills, such as the Airport Landfill, and decommissioning projects, such as the Omega West Reactor. In addition, all associated deliverables will have been submitted to the regulatory authority. FY 2006 is planned as a ramp-down year to complete closeout of the project and transfer of the remaining Surveillance and Maintenance (S&M) and treatment activities to the installation landlord. It is projected that the majority of regulatory approvals needed will have been granted by the end of FY 2006.

Beyond FY 2006

After FY 2006, environmental activities managed by the installation landlord are expected to consist mainly of subsurface monitoring of capped landfills. It is also conceivable that there may be a continuing pump and treat system for groundwater at one or more specific locations in the Canyons. The duration and extent of all S&M activities are subject to negotiation and approval by the regulatory authority.

Figure 7

Schedule Comparison Between Los Alamos National Laboratory Ten Year Plan And FY98 Activity Data Sheets (Submitted)





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Sandia National Laboratories

Project Work Scope Description

The Sandia National Laboratories (SNL) environmental restoration project is responsible for the clean-up of contaminated sites resulting from historic laboratory activities in support of national mission needs, primarily in the area of national defense. These activities centered around the research, development, and testing of the non-nuclear components of nuclear weapons. The environmental restoration sites are located at Sandia National Laboratories facilities, within the boundaries of Kirtland Air Force Base near Albuquerque, New Mexico, and near Livermore, California. The DOE and SNL developed a plan which defines the approach and funding necessary to complete clean-up of the laboratory by the end of FY 2000. The plan allowed SNL to be placed on DOE's Small Sites Strategy list, which calls for the rapid clean-up of DOE's smaller, less complicated sites. The plan was presented to both regulators and the public and has been supported by the SNL Citizens' Advisory Board. Funding constraints in FY 1997, however, have caused the schedule to slip by two years, to FY 2002 (Figure 8). This slip is reflected in the Ten Year Plan, as well as in the FY 1998 ADSs.

The environmental restoration activities at SNL are conducted in compliance with a Resource Conservation and Recovery Act/Hazardous and Solid Waste Amendments Permit. One of the assumptions made during the effort to place SNL on the Small Sites list (and which still holds true) is that the regulators will allow for the implementation of streamlined and innovative approaches to clean-up, as provided for in the SNL Permit. Regulator flexibility, cooperation, and responsiveness are vital to achieving Project completion in FY 2002 or earlier.

Assumptions

- ▶ The Ten Year Plan schedule and budget assume off-site disposal of waste generated from clean-up activities. DOE is attempting to permit a Corrective Action Management Unit (CAMU) at Sandia for the on-site containment of clean-up wastes. The CAMU has the potential to reduce clean-up costs and approval by the regulators is being sought.

FY 2006 Project Status

In 2002, all 218 environmental clean-up actions at Sandia National Laboratories will have been completed, including such high priority sites as the Chemical Waste Landfill, the Mixed Waste Landfill and the Radioactive Waste Landfill. In addition, all associated deliverables will have been submitted to the regulatory authority. By the end of FY 2006, all regulatory approvals are expected to have been granted.

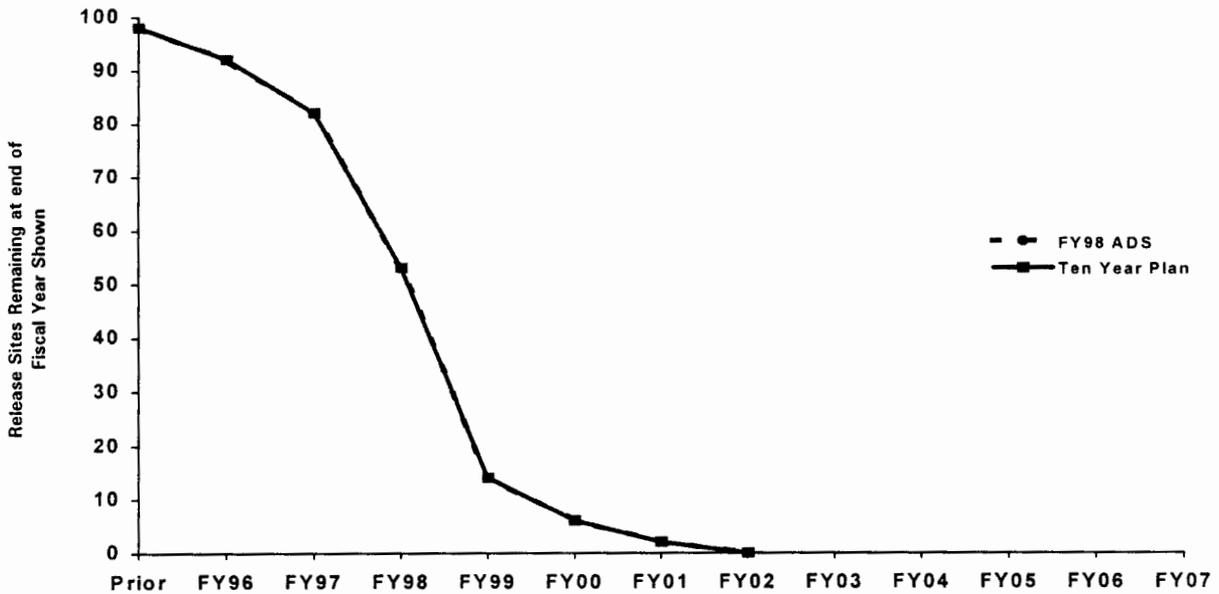


Beyond FY 2006

After FY 2006, environmental activities managed by the installation landlord at SNL are expected to consist of various environmental and groundwater Surveillance and Monitoring (S&M) activities. The S&M requirements are subject to negotiation and approval by the regulating authority and will be sufficient to ensure public health and safety.

Figure 8

Schedule Comparison Between Sandia National Laboratories Ten Year Plan And FY98 Activity Data Sheets (Submitted)*



* No Difference Between Ten Year Plan And FY98 ADS Data



Inhalation Toxicology and Research Institute

Project Work Scope Description

Currently, the Inhalation Toxicology and Research Institute (ITRI) environmental restoration project encompasses long-term surveillance and maintenance for all environmental restoration sites and supporting program management. The physical clean-up and disposal was completed in FY 1996, (regulatory approval pending) and existing project plans have been transferred without any changes into the Ten Year Plan. Final disposition of nitrate-contaminated groundwater is being negotiated with the regulators.

All wastes will be disposed of off site in FY 1996 and are not addressed here. The Plan is based on the following assumptions, given the current understanding of monitoring costs and expectations.

Assumptions

- ▶ The Plan reflects a high degree of confidence that no groundwater remediation will be required by the regulator.

FY 2006 Project Status

In FY 1996, all planned environmental clean-up and disposal of hazardous waste at the Inhalation Toxicology Research Institute will be completed. In addition, all associated deliverables will have been submitted to the regulatory authority. All regulatory approvals are expected to have been granted prior to FY 2006.

Beyond FY 2006

After FY 2006, there should be no environmental activities managed by the installation landlord. Some continued monitoring of slightly elevated levels of nitrates in the groundwater beneath the remediated sewage lagoons may be necessary until levels drop below standards. The duration and extent of all Surveillance & Maintenance activities are subject to negotiation and approval by the regulatory authority.



Pantex Plant

Project Work Scope Description

The Pantex Plant environmental restoration project is responsible for the clean-up of contamination of soils and groundwater resulting from the production and testing of explosives components for nuclear weapons. Industrial operations, in addition to site maintenance activities, utilized solvents, pesticides, and water treatment additives which were handled and disposed of using the standard practices at the time. Tests of weapons components contaminated some areas with explosives and heavy metals.

The objective of the Pantex environmental restoration project is to have all sites remediated or in remediation by the end of FY 2000 (Figure 9). Treatability projects, such as the groundwater treatment system, are designed to reduce contamination to meet Texas Risk Reduction Standards Guidance for soils and groundwater. The application of Risk Reduction Standards and treatability projects should lead to No Further Action (NFA) designation for the majority of Pantex release sites. The groundwater remediation operations, along with monitoring programs and regulatory/administrative support for Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) closure are the only actions expected to continue past the year 2000.

The environmental restoration activities at Pantex are conducted in compliance with a Resource Conservation and Recovery Act (RCRA) permit issued by the Texas Natural Resource Conservation Commission (TNRCC). In addition, the Pantex Plant was placed on the National Priorities List by the EPA in May 1994. DOE is currently negotiating a tri-party Federal Facility Agreement with the EPA and the TNRCC, with the expectation of the issuance of the final Record of Decision in FY 2000.

The objectives of the environmental restoration remediation project do not change with the incorporation of the Ten Year Plan. The goal of having all sites remediated or in long term operations by the year 2000 has not changed, and the funding to accomplish this is fully supported through the year 2002 in the Ten Year Plan.

Assumptions

- ▶ Program activities assume the issuance of the Record of Decision under CERCLA in FY 2000.
- ▶ Completion of sites occurs with the submission of a request for No Further Action to the TNRCC. Closure assumes timely approval from the TNRCC.

FY 2006 Project Status

In FY 2000 all environmental clean-up actions at the Pantex Plant will be completed (except for ongoing pump and treatment of ground water) according to the Corrective Action module of the RCRA permit. These actions include remediation of the high explosives disposal area and significant progress in treating the contaminant plume migrating off site in the perched aquifer. In addition, all associated deliverables will have been submitted to the regulatory authority. Following completion of a tri-party Federal Facilities Agreement, in addition to the permit (triggered by the Plant's recent



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placement on the National Priorities List), DOE may have some additional administrative and regulatory support functions that extend project closeout to FY 2001 or FY 2002 in order to meet CERCLA completion requirements. By the end of FY 2006, all regulatory approvals are expected to have been granted.

Beyond FY 2006

After FY 2006, environmental activities managed by the installation landlord at the Pantex Plant are expected to consist of pump and treat of the perched groundwater beneath the plant until clean-up standards are met, verified, and approved by the regulatory authority; and monitoring of the Ogallala aquifer to assure that regulatory standards are not exceeded. The duration and extent of all Surveillance & Maintenance activities are subject to negotiation and approval by the regulatory authority.

Figure 9

Schedule Comparison Between Pantex Plant Ten Year Plan And FY98 Activity Data Sheets (Submitted)





Kansas City Plant

Project Work Scope Description

The Kansas City Plant environmental restoration project is responsible for the clean-up of contaminated sites resulting from historic plant activities. The plant has been engaged in manufacturing activities requiring industrial solvents, pesticides, and water treatment additives commonly used in other industrial activities. Spills resulting from handling these chemicals and leaks from tanks and production activities have resulted in soil and groundwater contamination around the Kansas City Plant.

This new initiative to complete clean-up and closure of these contaminated sites within the next 10 years supports the project's completion date of FY 1999 (Figure 10), which was agreed upon prior to implementation of the Ten Year Plan. In no way does the transfer of existing plans into the Ten Year Plan framework compromise public or worker health and safety or degrade the quality of environmental work.

Assumptions

- ▶ The Environmental Protection Agency (EPA) concurs with the clean-up strategies proposed in the multi-site Corrective Measure Study and the Alternate Concentration Limits (ACL) Petition. ACL Petitions are based on risk: if EPA does not approve, the regulators may require more clean-up than recommended.
- ▶ If the Resource Conservation and Recovery Act (RCRA) Corrective Action oversight authority is transferred to the State of Missouri, the State will abide by prior EPA decisions.
- ▶ Funding will continue as needed to meet the Small Site Strategy schedule objective.

FY 2006 Project Status

In FY 1999, all environmental clean-up actions at the Kansas City Plant will be completed, and associated deliverables will have been submitted to the regulatory authority. Surveillance and maintenance and groundwater pump and treat activities will continue after 1999. By the end of FY 2006, all regulatory approvals are expected to have been granted.

Beyond FY 2006

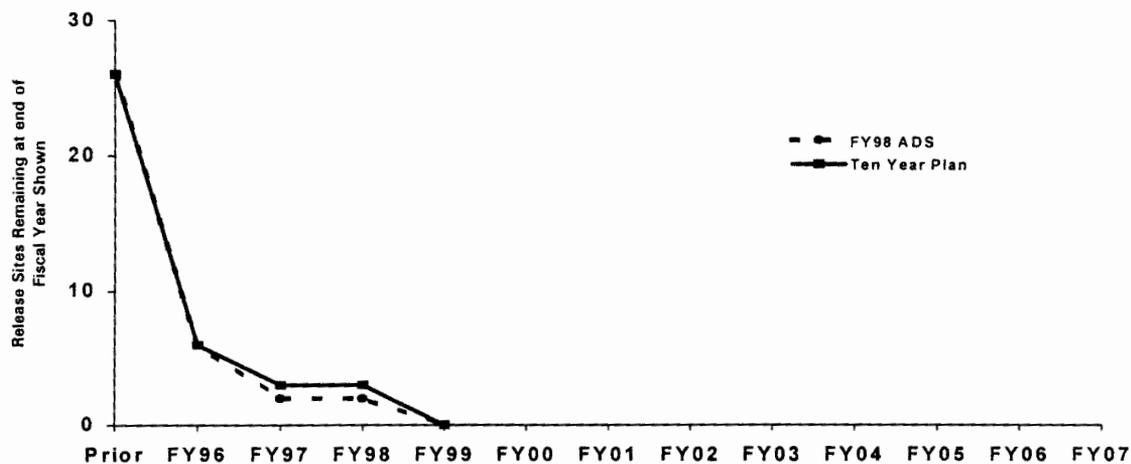
After FY 2006, environmental activities managed by the installation landlord at the Kansas City Plant are expected to consist of surveillance and maintenance (S&M) of the sites closed under institutional controls and groundwater pump and treat using ultra violet light. All S&M activities are subject to negotiation and approval by the regulatory authority.



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Figure 10

Schedule Comparison Between Kansas City Plant Ten Year Plan And FY98 Activity Data Sheets (Submitted)





South Valley Superfund Site

Project Work Scope Description

DOE, along with the US Air Force and the General Electric Corp., is a potentially responsible party (PRP) at the South Valley Superfund site for contamination allegedly from a facility owned by the Atomic Energy Commission from 1951 to 1967. For this reason, DOE is an active participant in the clean-up of the site. After the EPA issued a 106 Administrative Order against General Electric, a settlement agreement was reached between DOE, the U.S. Air Force (both previous owners of the facility), and General Electric (current owner of the facility) which defined cost distributions. General Electric is the lead PRP for characterization and remedial activities.

Two groundwater pump and treat systems have been built (one shallow, one deep) and are currently operating. Characterization and remedial activities are considered 100 percent complete. Long-term surveillance and maintenance activities (operation of the groundwater pump and treat system and groundwater monitoring) are expected to last until FY 2010.

FY 2006 Project Status

The Plan assumes that in FY 2000 a Government buy-out of liability will occur for the costs of long term maintenance and operations, releasing the government from any further liability. There will be no further Government involvement at the South Valley site after FY 2000.

Beyond FY 2006

No activities are expected to occur beyond FY 2000 for this site.



Uranium Mill Tailings Remedial Action

Project Work Scope Description

The Uranium Mill Tailings Remedial Action (UMTRA) Surface Project stabilizes and controls uranium mill tailings from 24 inactive processing sites in 10 states and at associated vicinity properties where tailings were used in the foundations of inhabited or commercial buildings or where tailings blew into open land surrounding the mill sites. The sand-like tailings are a result of uranium production from the early 1950s until the early 1970s. The UMTRA Surface Project disposes of the tailings in a safe and environmentally sound manner. Congressional authorization for surface tailings remediation expires in September 1996; however, Congress is expected to act on legislation to extend the expiration date to September 1998. Once surface remediation is completed, each uranium tailings disposal cell will be licensed by the Nuclear Regulatory Commission and transferred to the Grand Junction Projects Office. All sites are planned to be licensed and transferred by the end of FY 1998, with the exception of the Grand Junction, Colorado site, which will be licensed and transferred in FY 1999 (Figure 11).

FY 2006 Project Status

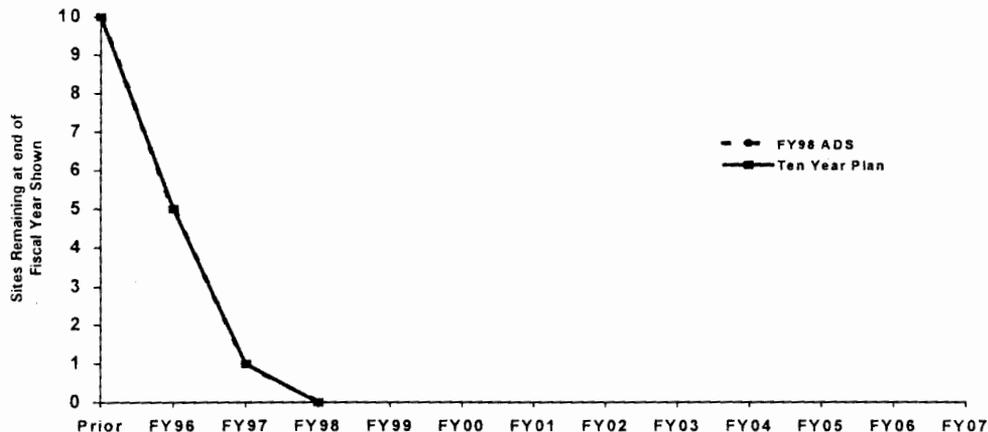
Funding requirements for the UMTRA program will cease in FY 1998, when field work will be completed and NRC licensing will be obtained. Responsibility for surveillance and maintenance of the sites will transfer to the DOE Grand Junction Projects Office.

Beyond FY 2006

No activities are identified beyond FY 2006.

Figure 11

Schedule Comparison Between Uranium Mill Tailings Remedial Action Ten Year Plan And FY98 Activity Data Sheets (Submitted)*





Grand Junction Projects Office

Project Work Scope Description

The Grand Junction Projects Office (GJPO) is currently responsible for several Environmental Management programs as well as for providing support to other DOE Operations Offices under its Work for Others program. The Monticello Mill Site Remediation Project includes the remediation of the former mill site, vicinity, and peripheral properties in and near Monticello, Utah, and the assessment and remediation of surface and groundwater contamination beneath and down-gradient from the mill site. The GJPO Remedial Action Project eliminates the potential hazards of long-term exposure to low-level radioactive contamination associated with past uranium ore processing activities at the Grand Junction facility. The Uranium Mill Tailings Remedial Action (UMTRA) Groundwater Project will conduct activities at the 24 Title I sites located in 10 states and on 4 Native American Tribal lands to bring groundwater contaminant levels resulting from past uranium milling activities into compliance with Environmental Protection Agency standards.

The Long Term Surveillance and Maintenance (LTSM) Program provides for the custody, surveillance, environmental monitoring, maintenance, site security, annual reporting, and emergency response (in the event of accident or site failure) for completed environmental clean-up sites from various programs. The Uranium Leasing Project consists of the Uranium Lease Management Program and the Test Pit Maintenance Program. The Waste Management Program provides for the management of all hazardous, low-level radioactive, mixed, PCB, PCB-mixed, solid, and non-hazardous waste generated from operations managed at the GJPO and provides technical support for off-site programs.

Grand Junction will complete the clean-up of all currently identified potential release sites by FY 2001 (Figure 12). A schedule illustrating completion dates of major GJPO projects is shown in Figure 13.

Assumptions

- ▶ The Grand Junction Projects Office will have no new continuing mission outside of LTSM activities.
- ▶ As a result, GJPO expects to reduce the extent of the physical site by approximately 40 percent by FY 2003. The resulting excess physical plant will be available to interested private or local governmental entities should this assumption of no new mission be forthcoming.
- ▶ Grand Junction is also developing a vision for the future related to identifying additional work activities. This will be accomplished through stakeholder input, analyzing long-term landlord costs, assessing savings from the new task order contracts, and completely evaluating the scope of the new mission as the DOE focus for LTSM activities.



FY 2006 Project Status

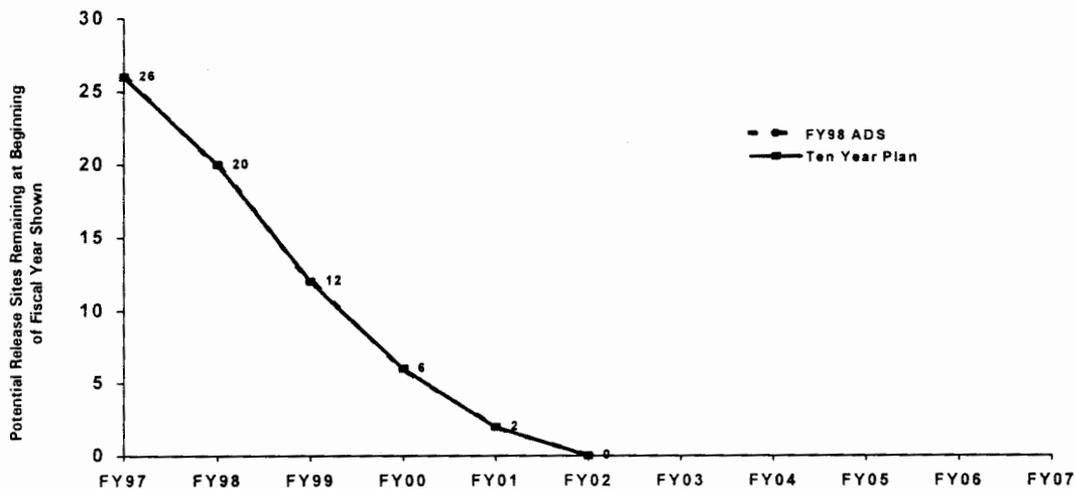
The Monticello sites will be remediated and repository and mill site restoration will be completed by FY 2001. Scheduled activities for the Monticello sites are in accordance with the Small Site completion strategy. The sites will be administratively removed from the National Priorities List on or before FY 2006. The Grand Junction Projects Office Remedial Action Project (GJPORAP) will complete decommissioning of the site by FY 2000. By 2006, the UMTRA Groundwater Project will have identified sites requiring no remediation, passive remediation, or active remediation.

Beyond FY 2006

Inspection of the Monticello mill site, vicinity and peripheral properties, and the repository area will be performed after FY 2006 in accordance with CERCLA requirements. Groundwater monitoring beneath the GJPO site will continue after FY 2006 to ensure that natural attenuation of the groundwater contamination continues. Monitoring of sites with passive remediation and active groundwater remediation activities will continue beyond FY 2006. Additionally, the GJPO will be responsible for continuing activities associated with DOE's LTSM.

Figure 12

Schedule Comparison Between Grand Junction Projects Office Ten Year Plan and Activity Data Sheets (Submitted)*



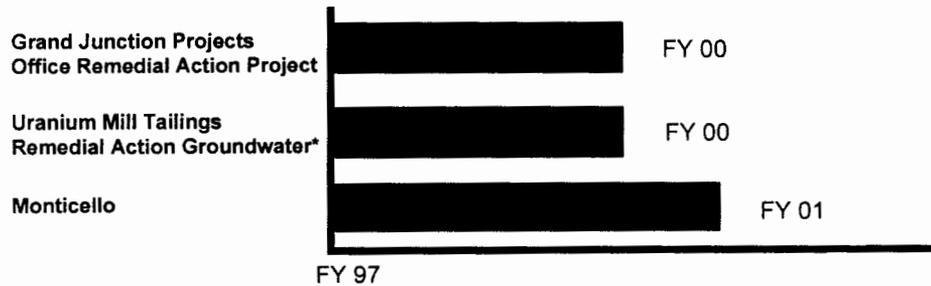
*No Difference Between Ten Year Plan and FY98 ADS Data



ENVIRONMENTAL MANAGEMENT TEN YEAR PLAN SUMMARY

Figure 13

Grand Junction Projects Office Clean-up Completion Schedule



*Cleanup complete reflects the initiation of active groundwater remediation at the two currently identified sites. There is a potential for more sites to be identified for active groundwater remediation. Operation, monitoring and surveillance activities at many sites will extend beyond the period of this Ten Year Plan.

Note: Waste Management and support activities are level-of-effort and will continue with the operation of the GJPO site.



Programmatic Mission Completion

Waste Management Program

The mission of the DOE Albuquerque Waste Management Program is to ensure DOE policy is adhered to as sites accomplish safe and effective treatment, storage, and disposal of wastes, and to ensure that pollution prevention is supported in pursuit of this mission.

The DOE Albuquerque Waste Management Division (WMD) provides the program management for all wastes for the production plants of Pantex and Kansas City, the Los Alamos and Sandia national laboratories, and the Inhalation Toxicology Research Institute. WMD provides technical and programmatic support in the area of waste management to the Pinellas Plant, the Grand Junction Projects Office, and to the Environmental Restoration Division, when necessary and appropriate. WMD provides programmatic direction for waste operations; a focal point and oversight for all waste minimization and pollution prevention activities; and external interface on waste issues, as appropriate.

Assumptions

- ▶ Historical transuranic waste will be worked off by the end of FY 2006, assuming the opening of the Waste Isolation Pilot Plant in April 1998 (Figure 14).
- ▶ Historical mixed low-level waste will be treated and worked off by the end of 2006 (Figure 15).
- ▶ Historical low-level waste will be worked off by the end of FY 2002 (Figure 16).
- ▶ The organizations that generate waste from on-going mission are frequently separate from the organizations that must pay to treat, store, or dispose of the waste. Often, this removes incentives for the generators to improve efficiencies and reduce the size of their waste streams. A financial arrangement that requires generators to pay for some of the waste management costs is being piloted at several sites in the DOE AL complex. Since the scope of this financial arrangement has not been finalized, for the purposes of the Plan all of the costs for future waste volumes are covered in the waste management charts. The amount of work to be done and the cost for doing that work will not change, but responsibility for paying for the work will shift over time. At some point all of the costs for managing wastes from ongoing operations will be the responsibility of the organization that generates the waste. This transition should be complete no later than 2000. However, funding for the work-off of legacy waste will remain the responsibility of the EM program.
- ▶ Savings from pollution prevention and new technologies are not specifically addressed in the Plan, but are included in the waste volume and cost projections. Pollution Prevention is being taken into consideration at the design stage for both new mission work and environmental restoration projects. DOE AL is on track to meet the Secretary of Energy's goal of generating 50 percent less routine waste in FY 1999 than was produced in FY 1993. As of the third quarter of FY 1996, 190 percent of AL's annual low-level waste avoidance goals have been met; 1200 percent of our mixed low-level waste avoidance goals have been met, and 337



ENVIRONMENTAL MANAGEMENT TEN YEAR PLAN SUMMARY

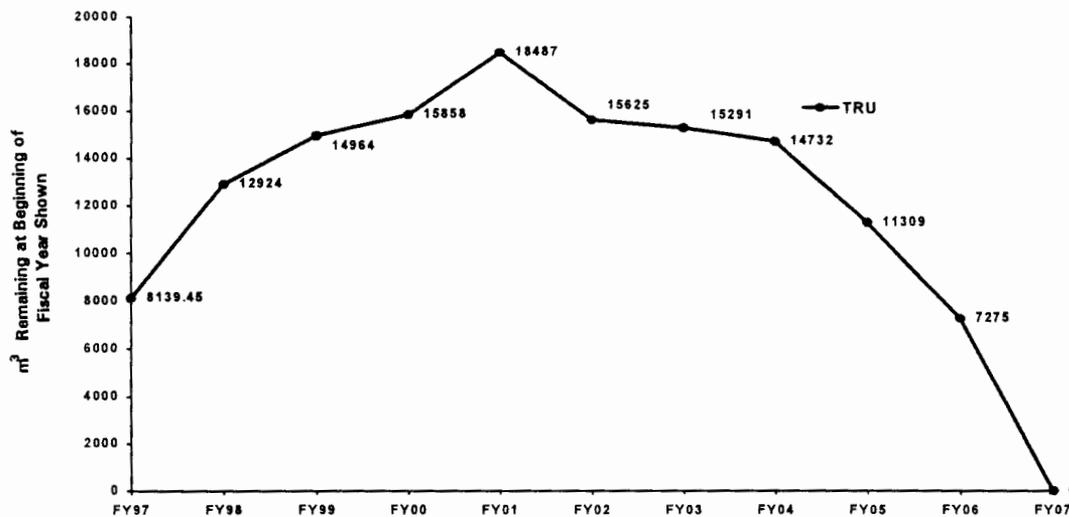
percent of our hazardous waste avoidance goals have been met. Despite the successes of Pollution Prevention, our hazardous waste generation from non-routine activities (environmental restoration particularly) is well above target volumes. This increase is largely due to accelerated clean-ups. Although the Ten Year Plan does not show the contributions of Pollution Prevention directly, the cost avoidance from Pollution Prevention activities in AL's performance measures is tracked.

- ▶ Some new mission work is in the preliminary planning stages; the effects such work may have on volumes and funding are unknown at this time.

The Plan does not differ significantly from the work planned in AL's FY 1998 budget submittal for Waste Management. The goals of the Plan match the aggressive plans AL has pursued for Waste Management. The Plan shows the acceleration of the disposal of transuranic wastes in our inventory. The rest of our mission and goals remain unchanged.

Figure 14

Albuquerque Operations Waste Management Program Historical Transuranic Waste Workoff



* Principally Los Alamos National Laboratory



Figure 15

Historical Mixed Low Level Waste Treatment Volumes

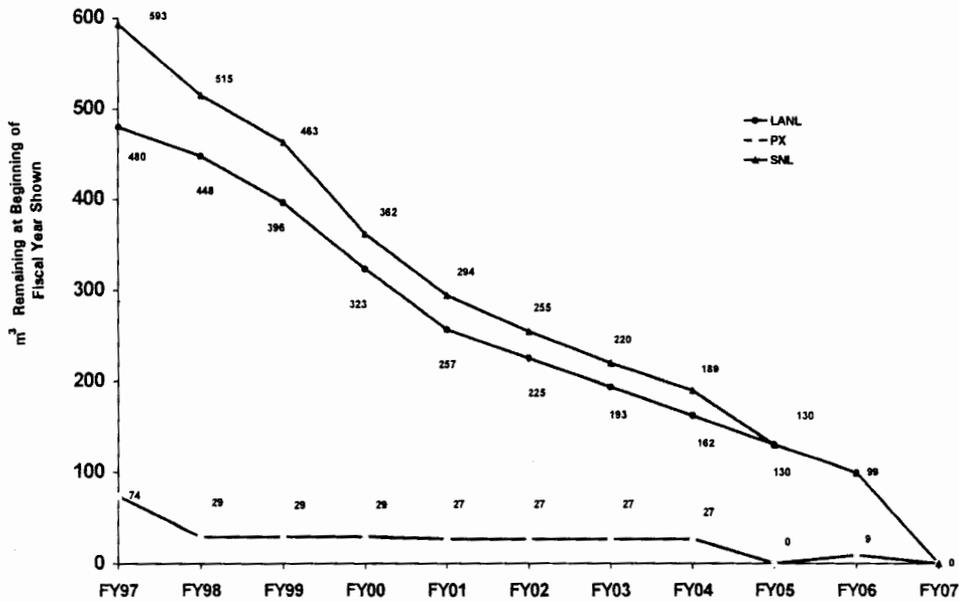
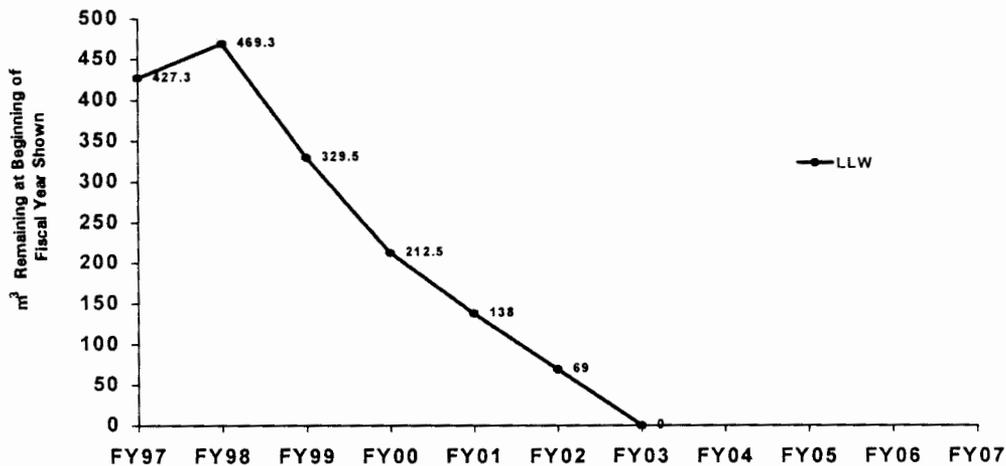


Figure 16

Albuquerque Operations Waste Management Program
Historical Low Level Waste Workoff





Facility Closure/Transition

The Pinellas Plant close-out project is a consolidation of three related activities: Landlord, Facility Operations and Site Deactivation/Transition, and Site Restoration Activities. Landlord consists of all activities associated with maintaining the site infrastructure at a caretaker level, including administrative support, security, maintenance, utilities, contract close-out/transition, and a portion of the associated workforce reduction actions/costs which includes, for example, payments against workers compensation claims, long-term disability, and benefit administration. This action also includes payments against DOE's projected pension liability for the Pinellas Plant workforce. Facility Operations and Site Deactivation/Transition includes management, administration, and planning for facility transition activities, including the development, integration, and implementation of policies; site specific transition, site development, and facility transfer plans; and project management for deactivation activities. Site Restoration Activities involves the long-term remediation of contaminated groundwater associated with the Pinellas Plant; treatment, storage, and disposal of wastes generated at the Pinellas Plant and Resource Conservation and Recovery Act closure of waste facilities; and execution of the Pinellas Plant's liability under the Comprehensive Environmental Response, Compensation and Liability Act former off-site waste disposal.

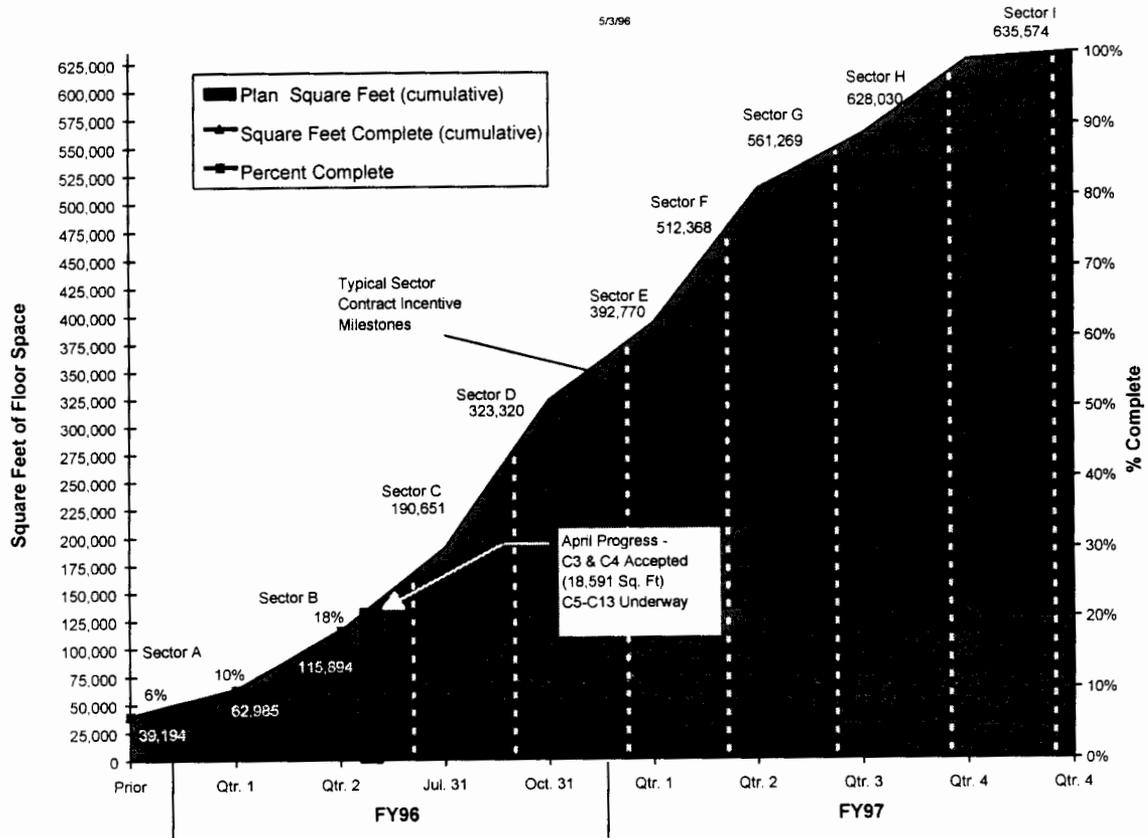
The Ten Year Plan supports the transition of the Pinellas Plant to the Pinellas County Industrial Council (PCIC) by the end of FY 1997 (Figure 17). All potential release sites have met the Plan definition of complete clean-up prior to the start of FY 1998. The only on-going activities after FY 2006 will be the operation, surveillance, and maintenance of the groundwater remediation project, disposal of its associated collected wastes (projected through FY 2012), and continuing payments against the pension liability.

Funding and activities for the Pinellas Plant as shown in the Ten Year Plan and in the FY 1998 Activity Data Sheets supporting the FY 1998 budget are the same.



Figure 17

Pinellas Plant Area Transition Profile





Miscellaneous National Programs

DOE Albuquerque is responsible for several programs of national significance that are documented in the Ten Year Plan. These programs include Plutonium Research and Development, Technology Development, DOE Albuquerque Transportation Management, and the Characterization Management Program. Funding levels for these programs were determined by DOE Headquarters and are sufficient to complete the required activities.

The Plutonium Research and Development Program was developed in response to the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-1, which expressed concern about nuclear materials left in the manufacturing "pipeline" after the United States halted its nuclear weapons production activities. In responding to DNFSB Recommendation 94-1, DOE committed to complete specific nuclear materials stabilization tasks in specified three to eight-year timeframes. The research committee chartered by the Nuclear Materials Stabilization Task Group focused its review on existing stabilization technologies and on technologies currently under development to determine their adequacy relative to the three-year commitments. The committee also outlined research and development requirements to address technologies needed to support the DOE's eight-year commitments.

Funding levels for Technology Development in the Plan will be provided by DOE Headquarters. The DOE Albuquerque Site Technology Coordination Group (STCG) has determined that the Headquarters-established Focus Areas and associated Cross-cutting Areas may not be able to address all environmental restoration and waste management needs by providing appropriate technologies. The DOE Albuquerque STCG has identified the need for \$5 million annually from FY 1997 through FY 2003 and \$2 million annually from FY 2004 through FY 2006 as part of the national Technology Development program funding. This will enable the development of specific technologies to address AL's smaller scope problems but which do not provide a good return on investment for the larger picture Focus and Cross-cutting Areas.

The DOE Albuquerque Transportation Management Program provides base technology development support to DOE Headquarters in its role as the transportation center for the DOE. Base technology is the development of concepts and technologies needed to advance current and future radioactive material transportation capacity, reduce costs, and assure the public of the safety of radioactive material transportation.

The Characterization Management Program addresses the full range of issues encountered in Characterization Management, including (1) planning how many and what type of laboratory environmental analyses are required for characterization or remediation; (2) ensuring appropriate sample collection techniques are employed; (3) ensuring cost-effective procurement strategies are developed and utilized; and (4) ensuring, through quality assurance and quality control processes, that data is technically defensible.



Conclusions and Next Steps

DOE Albuquerque has demonstrated in the Ten Year Plan that it can meet the Environmental Management vision to complete clean-up by FY 2006. For the work remaining, constant funding levels will add to the challenge of succeeding with an accelerated schedule. The Plan identifies excess funds, beginning in FY 1999, in relation to the flat funding profile guidance provided by DOE Headquarters. Potential future use of these funds is currently being evaluated on a national level. For example, while a portion of these excess funds could be applied to DOE Albuquerque waste or decontamination and decommissioning needs, they could also be used by other Operations or Field Offices to accelerate clean-up of high risk sites or to eliminate costly mortgage commitments. Maintaining a national perspective will ensure that limited funds are applied where they can contribute the most toward completing the overall EM mission.

As stated at the beginning of this summary, the Ten Year Plan is envisioned as a living document, and will be revised as necessary to reflect significant changes in conditions or base assumptions. For this first draft of the Plan, it is our goal to maximize stakeholder involvement and we encourage your questions, comments, and input. A final version of the Plan, using FY 1997 assumptions and taking into account comments and input received from stakeholders and DOE Headquarters, will be completed in the Fall of 1996 and made available to all stakeholders. On September 16, 1996 DOE-HQ will hold a video-conference with AL stakeholders to discuss comments to the draft AL Ten Year Plan. Please contact your local DOE Area Office representative or Tracy Loughead at 505 845-5977 or Paul Mann at 505 845-4325 with any input or comments you may have on the AL Ten Year Plan.