

## **LONG-TERM ENVIRONMENTAL STEWARDSHIP (LTES) PLANNING AND IMPLEMENTATION**

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### **ABSTRACT**

The Department of Energy's Sandia Site Office (SSO) and Sandia National Laboratories (SNL) published the Draft Long-Term Environmental Stewardship (LTES) Plan<sup>1</sup> in August 2001. With the participation of regulators, environmental personnel at the labs, and a spectrum of interested citizens, the draft plan was guided by three task group-generated documents.

In 2003, the plan was updated through public interaction in addition to establishing LTES Transition Teams that would assist in planning the implementation of LTES activities that will be required for the environmental restoration (ER) legacy sites. Updating of the plan consisted in addressing the status of about 17 issues ranging from discovery of new sites to funding mechanisms.

This paper outlines the chronology of the efforts taken and planned to arrive at a final LTES strategic and implementation plan for the ER sites and the challenges being encountered as the remediation work winds down and the LTES Project Baseline<sup>2</sup> transitions into a LTES program with long-term commitments. Intertwined with these site activities is the continued consideration of public expectations. Some of the issues involving LTES transition from the cleanup project to an institutional program and the process of involving the community in such an effort bring some lessons learned worth sharing.

### **INTRODUCTION**

The SSO defines LTES as:

“Activities and processes that ensure the long-term protection of human health and the environment, including the proactive management for protection and sustainable use of natural and cultural resources affected by Sandia National Laboratories operation and operational legacies.”

Of particular interest, is the transition from active remediation under the auspices of the ER Project to long-term care activities that are to be performed by the institution's environmental management program at SNL. This change in responsible organizations (and accompanying funding sources) presents a unique challenge to ensure the successful transition and

implementation of LTES activities as the ER project reaches completion. A phased approach over the next year is anticipated to fully integrate LTES into the existing institutional monitoring program. This paper addresses the approach to planning, implementing and documenting LTES transition activities at SNL and the unique issues that arise when planning LTES activities at a site where the principle mission is defense related and an existing infrastructure performs “LTES-like” monitoring activities on a site-wide basis.

Considered a "small" ER Project site by the standards of the DOE complex, SSO/SNL launched its ER Project in the early 1990s and today has cleaned up or progressed toward the closure of more than 95 percent of the 260 plus environmental sites originally identified. Major efforts are under way to complete most of the remaining work on two large landfills and three groundwater areas. Administrative closure of the last of the sites and project closure are presently targeted for the end of fiscal year (FY) 2006.

A site is considered closed when the state regulator approves its no further action status. ER sites are approved for No Further Action with and without controls based on risk and future land use (industrial or recreational). With less than 2 fiscal years until the end of the ER Project, SNL has begun to transition activities to the institutional program and is working to develop a more comprehensive LTES Program that includes both ongoing operations and operational legacies.

This paper is a general chronological account of how SSO and SNL have worked together internally and with the Albuquerque, New Mexico community, to arrive at an implementation plan for the ER sites. It concludes with some of the lessons learned along the way.

## **SETTING OUT**

SSO and SNL have been working together to arrive at an LTES baseline that can be used for transition and function as a program at the beginning of FY 2007. For the ER Project, there is an existing work breakdown structure and corresponding project baseline that facilitates the measure of ER project performance. SNL is currently developing a LTES Project Baseline that will integrate ER activities into the institutional LTES program that currently performs site-wide activities pertaining to:

- Groundwater Protection
- Stormwater
- Air Quality Compliance
- Meteorological Monitoring
- Terrestrial Surveillance and Ecological

The August 2001 Draft LTES Plan contained an outline that captured the following topics which have then transitioned to the LTES Project Baseline. Below is a comparison of both outlines.

### Draft Plan Outline

Information Management

### LTES Project Baseline

Information Management

Institutional Controls  
Monitoring  
Maintenance  
Management  
Community Involvement

Institutional and Physical Controls  
Environmental and Site Monitoring  
Administration and Management  
Public Outreach

The activities involved in LTES are diverse and include surveillance, management systems, maintenance, monitoring and institutional controls of former ER sites. Additional activities include reporting, records management, public involvement and any other activities that ensure continuing protection of public health and the environment.

The final performance requirements for LTES activities will be based on post-closure care plans, no further action determinations with controls, DOE Orders, interim LTES guidance documents and public stakeholders values and expectations.

## **GOING PUBLIC**

The public was presented the five topical areas of the LTES Project Baseline with discussion of how the public wanted to participate in defining the activities within each category. The public's choice and focus during the transition planning and implementation phase of LTES has been centered on Public Outreach. The Public Outreach Transition Team focused on defining the most important communication vehicles that should be implemented as part of LTES.

Through bi-monthly sessions, the team determined that a website, a traveling LTES exhibit, and an educational curriculum were the most efficient methods for communicating LTES with the general public. In addition, a weeklong summer academy with LTES as the focus was presented to high school students during the year the team worked together. Also, there are plans for LTES performance reporting to be included in the Annual Site Environmental Report<sup>3</sup> (ASER) that DOE sites publish as a normal business practice.

## **SELF-ASSESSMENT**

For ongoing operations, SNL has been performing LTES-like activities (site-wide environmental monitoring) for many years in conformance with DOE Order 450.1 Environmental Protection Program<sup>4</sup> and its predecessor DOE Order 5400.1, General Environmental Protection Program<sup>5</sup>. These orders established mandatory environmental protection standards for DOE operations. Now as ER activities come to completion the ER Project and the SNL Environmental Programs for ongoing operations will need to merge as one. During this merger it is important that the work and knowledge established in the ER Project is not lost and clear requirements are established that will ensure that any ER site, with residual contamination, will continue to be protective of human health and the environment for the foreseeable future – as required by state and federal regulations.

To facilitate this hand-over by October 2006, SNL developed 5 general working groups: Program Management, Public Involvement, Environmental/Site Monitoring, Institutional and Physical Controls, and Information Management, which are in alignment with the LTES Project Baseline. Each of these areas requires some degree of input from the DOE, SNL and ultimately the community. Work-plans have been developed for each of these groups but progress has been slow. Since SNL will be one of the first National Nuclear Security Administration (NNSA) ongoing-mission sites to successfully complete their ER mission and transition into LTES activities, there are no other NNSA sites to turn to for lessons learned. To facilitate the successful transfer, the SSO Office of Oversight and Assessment has teamed with the ER project staff to perform an LTES assessment on an annual basis until the program has been fully established, and periodic assessments thereafter. The LTES Assessment Plan<sup>6</sup> has been developed by a team of DOE/NNSA staff with extensive years of experience in LTES related activities. The New Mexico Environment Department Oversight Bureau also provided input into the LTES Assessment Plan. The draft plan was then discussed with SNL and provided for review and comment. Lines of Inquiry for the assessment have also been developed and are broken down into the following five categories; management systems; roles and responsibilities, planning, implementation and report evaluation.

The assessment will be conducted in FY05, and FY06 during the transition period. The performance requirements for the FY05 and FY06 assessments will evolve to reflect information learned from the previous assessments and will reflect the progress and changes that occur as the transition of SNL LTES matures from year to year. The assessment (FY05) will focus primarily on the establishment of management systems and plans needed to ensure timely transition and implementation by the end of FY06. It is anticipated that as the LTES program matures, subsequent assessments may focus on more specific LTES activities and requirements leading to implementation.

In 2003, DOE Order 450.1 that requires SNL to have an Environmental Management System (EMS) implemented by the end of 2005, was added to SNL's contract. SNL has benchmarked EMS guidance from other DOE sites, DOE and Executive Orders, the Environmental Protection Agency (EPA) and International Standards Organization (ISO) 14001, to expedite and improve their program. NNSA guidance documents for 450.1 have been developed that refer to LTES related activities. It is anticipated that the SNL EMS system will be the umbrella that will capture both legacy and ongoing LTES related activities. Since both ER LTES implementation and EMS implementation are on a parallel path the LTES assessment will cover a broad scope not limited to just ER related activities. The assessment plans will follow the definition of LTES as provided in the introduction. This definition would cover both ongoing as well as legacy LTES activities.

## **PUBLIC REACTION**

Although citizen participation and attendance appears to be declining, the reaction to the approach on transition planning and implementation has been very positive. It is the SSO's opinion that the public understands that they are part of the peer review process for finalizing the LTES Draft Implementation Plan<sup>7</sup> and feel that their expectations are being met under the area of

Public Outreach due to the accelerated implementation of activities in this area. For the next phase of Public Outreach activities, plans call for the training of citizen volunteers on LTES curriculum where they can in turn present LTES to their neighborhood associations, clubs and schools. In general, some of the public understands the issue of limited federal budgets for LTES planning and implementation and the need for communities to assist in sustaining LTES activities for the long run.

## **LESSONS LEARNED**

Some of the lessons learned from the ongoing transition planning and implementation of LTES for ER sites include:

- Early identification of LTES requirements by the DOE and its Contractors and planning between the groups delivering and accepting the “LTES package” should be emphasized.
- LTES planning and transition costs are usually underestimated and require consistent membership to avoid re-work.
- Scoping and costing LTES activities using the project baseline approach has proven to be effective but should consider both the receiving organization as well as the organization transferring the LTES responsibilities.
- Involve the public early and make the end results clear to participants and reviewers.
- Balance public expectations on public outreach with the need for the public to help sustain some of those expectations.
- Consider the idea of creating a pilot LTES sub-project with a citizen group to see how public interaction supports the process.

To date, SSO and SNL are assessing the need to accelerate the publication of the final LTES Implementation Plan, to coincide with the possible transfer of the ER Project from DOE Environmental Management to the NNSA at the end of FY 2005 without affecting quality and continued public interaction.

## **REFERENCES**

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2. Long-term Stewardship Project Baseline, Sandia National Laboratories, New Mexico, January 2005

3. Sandia Report, SAND2004-2813 Calendar Year 2003, Annual Site Environmental Report for Sandia National Laboratories, New Mexico, September 2004
4. DOE Order 450.1, Environmental Protection Program, 2003
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7. Long-term Environmental Stewardship Draft Implementation Plan, Sandia National Laboratories, New Mexico, October 2004