

APPENDIX E

LOW-LEVEL WASTE PROGRAM KNOWLEDGE MANAGEMENT

Knowledge management (KM) is a key issue that must be addressed in the near term for the NRC's Low-Level Waste (LLW) program to remain effective in future years. As characterized in the body of this strategic assessment, the LLW program encompasses a broad range of issues that often have complex technical, policy and political considerations. In many cases these issues also have a long and complex history. Understanding of how these issues, as well as NRC's positions on them, have evolved over time is critical to effectively executing programmatic activities. Over time as the scope and structure of the LLW program evolved, essential knowledge has been concentrated in only a few individuals, several of whom are currently retirement-eligible or are nearing this point. These staff have been involved in the LLW program for multiple decades, including the 1980s when the program was at its high point in terms of budget and scope of activities.

While having such depth and expertise among the staff currently allows the LLW program to perform at a high level, it is expected that a significant portion of the program's knowledge base will be lost in the coming years. Program management has been aware of this challenge for some time and has initiated a knowledge management strategy to assure the program maintains its high level of performance. The strategy can be described as consisting of two key components: (1) recruitment of key employees and (2) knowledge transfer program. Starting in FY2004, program management initiated an effort to bring in experienced staff to address the increasing interest in LLW and to serve as mentors for junior staff. This effort included using the retired annuitant process to bring back one former NRC staff member with significant experience, rehiring a former NRC staff person with significant NRC and industry LLW experience, and recruiting a senior NRC staff person back to the program. Starting in FY 2006, NRC received a budget increase for LLW and was able to recruit one Nuclear Safety Professional Development Program (NSPDP) employee and in FY 2007 the program hired one new GG14 level staff person. The staff will continue to use this recruitment strategy, including use of the NSPDP, as new LLW staff are hired in the future.

LLW program staff and management have considered the strategies described in the agency's KM plan¹ and have developed a program-specific knowledge transfer plan. The plan is based on a practical framework for KM that includes three elements: (1) documenting historical knowledge and developing written procedures; (2) teaching junior staff in focused topic areas; and (3) on-the-job training and mentoring (including strategies such as double encumbering senior staff as soon as practicable after they become eligible for retirement). The implementation of this knowledge transfer plan is being initiated. Maintaining the level of expertise needed to effectively conduct the LLW activities identified in this assessment will require a focused and sustained KM effort. Given the complexity of the LLW program, significant time will be required for training and mentoring of junior staff. It is important to note that KM activities require an investment on the part of senior staff as well as new staff. In some instances, the productivity of senior staff may be impacted as they work to document procedures and practices and mentor junior staff, as opposed to simply completing activities independently.

¹ SECY-06-0164, The NRC Knowledge Management Program, July 25, 2006.

The staff did not attempt to estimate resources needed for knowledge transfer (i.e., on the job training) for all twenty activities identified in the strategic assessment, primarily because there is limited baseline data from which to generate a meaningful estimate. However, staff's current schedule and resources for activities in Table 1, that are expected to be completed in FY 2008 reflect consideration of the resources and time needed for knowledge transfer activities. Staff intends to collect baseline data on the cost and time of knowledge transfer activities in FY 2008 and FY2009 to inform future budget and planning decisions. .