



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

Draft Accelerating Cleanup: Paths to Closure Document

INTRODUCTION

The Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board (CAB) commends the U.S. Department of Energy (DOE) for producing the *Draft Accelerating Cleanup: Paths to Closure* document (hereafter called *Paths to Closure*). An integrated approach to management of the environmental management (EM) program across the entire DOE complex has been needed. This document represents a good first step.

The INEEL CAB appreciates DOE's efforts to respond to public comments on previous versions of the document. Attachment B to the INEEL-specific volume of the document provides a useful tool for communicating with the public about the comments DOE received on the previous version of the document and how those comments were addressed in this revised version. We understand that site-specific volumes for other sites did not include a similar attachment.

The INEEL CAB commends DOE on its obvious efforts to communicate the nature and extent of the problems addressed by the EM program. Appendix A in the site specific volume for the INEEL offers a concise presentation of appropriate and necessary information to help stakeholders understand the complexity of the program. The "football field" diagram (Figure 1 of the INEEL site-specific volume) helps stakeholders visualize the volumes of waste products managed at the site. We also appreciated presentations provided by DOE personnel on the document as they allowed an enhanced understanding of how the INEEL's EM program fits into the overall picture.

We do have concerns about and recommendations on both the national and the INEEL site-specific volumes of the document which are presented below. They were formulated based on our understanding of the programs as described in the document and other information provided to the Board to support our review. While most of the points raised in this recommendation have application for the entire DOE complex, we have included site-specific examples to illustrate our points where appropriate. Each specific recommendation appears in a bolded typeface and has been assigned a number to assist in tracking.

GLOBAL RECOMMENDATIONS

(G-1) In order to achieve a fully-integrated approach, the INEEL CAB recommends that DOE incorporate waste streams under the auspices of other DOE programs (outside the EM program) into the *Paths to Closure* document. Such waste streams should be portrayed on the baseline disposition maps, as well. For example, the wastes managed by Argonne National Laboratory - West (ANL-W) should be included in the *Paths to Closure* document.

(G-2) The INEEL CAB recommends that DOE add a diagram (similar to the football field diagram) to each site specific volume of the *Paths to Closure* document depicting wastes by their level of radioactivity. Such a diagram will enhance the stakeholders' understanding of the nature and extent of DOE's stewardship responsibilities at each DOE site.

(G-3) The INEEL CAB recommends that DOE integrate the management of the environmental restoration (ER) program with the management of the waste management (WM) program to the extent possible. In addition, the wastes depicted on ER program baseline disposition maps should be incorporated into the other, relevant maps for each site. For example, low-level wastes (LLW) that result from implementation of the ER program at the INEEL should be managed in the same manner as LLW under the auspices of the EM program at the INEEL and they should appear on the INEEL LLW Baseline Disposition Map.

(G-4) The INEEL CAB recommends that DOE add improved descriptions to the document for all projects—such as Navy projects—not under the auspices of the DOE EM program. This is especially important for all projects that DOE is or will be reliant upon in complying with enforceable laws, regulations, agreements, and commitments.

(G-5) The INEEL CAB recommends that DOE prepare annual progress reports on activities and accomplishments under the Accelerating Cleanup program in addition to periodic revisions to the document. Such progress reporting should occur in coordination with other annual progress reporting, such as efforts at the INEEL to support the Site Treatment Plan. The Annual Accelerating Cleanup progress reports should document progress toward meeting commitments made in the 1998 *Paths to Closure* document. The annual progress reports will ensure that stakeholders are able to more fully understand program continuity.

(G-6) The INEEL CAB recommends that DOE pursue waste minimization efforts to the extent practical. The manner in which waste minimization efforts will be applied at each site should be included in the descriptions of the sites in the *Paths to Closure* document. The descriptions will allow stakeholders to develop an understanding of how such efforts contribute to the responsible management of the EM program. The Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should include information on the effectiveness of waste minimization efforts.

(G-7) The INEEL CAB recommends that DOE provide a better explanation of and more fully integrate the concept of programmatic risk throughout the *Paths to Closure* document. The document should allow stakeholders to develop a better understanding of how programmatic risk affects management of the program.

(G-8) The INEEL CAB recommends that DOE develop strategies for minimizing programmatic risk plans for those projects with the highest programmatic risks. We further recommend that DOE develop contingency plans for the same projects in case the preferred path forward cannot be implemented. The *Draft Paths to Closure* document assumes that Yucca Mountain will be available as a waste repository, but it lacks a contingency plan should the facility fail to open. The Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should identify new contingency plans developed as a result of problems experienced in implementing the commitments in the 1998 *Paths to Closure* document.

(G-9) The INEEL CAB recommends that DOE present funding needs in a way that will allow stakeholders to understand when funding shortfalls would exacerbate the programmatic risks. That information will enhance the public's understanding of how important adequate funding is to the DOE's ability to fulfill its commitments and mission.

(G-10) The INEEL CAB recommends that DOE delineate all enforceable compliance requirements and the budgets necessary to comply with those requirements for all DOE site in the national volume of the *Paths to Closure* document. While comparable information may be available in each of the site-specific volumes, that presentation does not allow for comparisons among sites.

(G-11) The INEEL CAB recommends that DOE consolidate the summary information for each DOE site in Appendix E of the national volume and eliminate Chapter 3. The splitting of site summaries between Chapter 3 and Appendix E does not serve any useful purpose. It could also be misconstrued to mean that the sites in Chapter 3 are preferred to those in Appendix E, even though there is a disclaimer in the text.

(G-12) The INEEL CAB recommends that DOE apply the concept of mortgage reduction to further identify potential for achieving economies within the program. The concept should be explained better and integrated more fully into the document.

(G-13) The INEEL CAB recommends that DOE clarify its definition of “closure” as it is not well communicated in the *Draft Paths to Closure* document. It is not clear if closure means completion of the EM program at a site or closure of the site altogether. The term “critical closure path” similarly needs clarification.

(G-14) The INEEL CAB insists that DOE take measures to ensure that cleanup will continue at the INEEL. The schedule in the national volume of the *Draft Paths to Closure* document indicates that INEEL will be the last DOE site to be cleaned up. The INEEL CAB is concerned that means that cleanup of the INEEL is of the lowest priority to the Department. As departmental funding will surely decline over time, we fear that the INEEL will never be cleaned up. Such an outcome would be completely unacceptable to stakeholders in Idaho.

(G-15) The INEEL CAB recommends that DOE develop and present its plans for coordinated intersite handoffs of waste and discuss these plans in the *Paths to Closure* document. For example, the baseline disposition map for Spent Nuclear Fuel at the INEEL shows an ultimate disposition for INEEL-SNF-10 being a “handoff to the Navy,” yet provides little information about that handoff.

(G-16) The INEEL CAB recommends that DOE add descriptions of the decision-making process that will be used to select the ultimate disposition for each of the waste streams that are designated with “To-Be-Determined” (TBD) dispositions on the baseline disposition maps. The description should include a list of candidate alternatives being considered in the decision-making process and identify the schedule for completion of the process.

(G-17) The INEEL CAB recommends that DOE identify and aggressively pursue technology development and deployment efforts needed to support cleanup and closure activities. Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should report performance milestones for technology development and deployment.

BUDGET RECOMMENDATIONS

The INEEL CAB recognizes that the *Draft Paths to Closure* document is neither a decision document nor a budget document. We do recognize how important the document will be in establishing policy with regard to the programs portrayed, however. As a result, we have several recommendations with regard to the budget implications of the document that are discussed in this section.

(B-1) The INEEL CAB insists that all budgets presented in the *Paths to Closure* document must reflect adequate budget and work scope to allow full compliance with all enforceable laws, regulations, agreements, and commitments as required by Executive Order 12088. The INEEL CAB has been told that budget targets provided by DOE-HQ will not allow for full compliance with all laws, regulations, agreements, and commitments at the INEEL. This is unacceptable. The DOE must request sufficient funds for full compliance.

(B-2) The INEEL CAB recommends that life cycle cost estimates presented in the *Paths to Closure* document should be calculated using one consistent approach for DOE-Headquarters and all field offices.

(B-3) The INEEL CAB recommends that the *Paths to Closure* document provide more detailed cost estimates. For example, we would appreciate an explanation of the variation over time (e.g., the peaks and valleys) for all life cycle cost estimates provided in Appendix A of the INEEL site-specific volume. In addition, stakeholders and representatives of the State of Idaho’s INEEL Oversight Program should be kept informed about the INEEL cost estimating process, as appropriate.

(B-4) The INEEL CAB recommends that DOE establish and implement a charge-back system across the complex as soon as possible for charging all generators for treatment and disposal services. For example, Argonne National Laboratory–West (ANL-W), the Naval Reactors Facility (NRF), and others should reimburse the INEEL for costs associated with treatment and disposal of wastes generated at their facilities.

(B-5) The INEEL CAB recommends that DOE identify the compliance milestones that would be achieved and those that would be jeopardized under baseline and target budget scenarios for the entire complex in the *Paths to Closure* document. The annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should clearly identify how changes in target budgets will affect the Department's ability to comply with regulatory obligations at each site.

(B-6) The INEEL CAB recommends that DOE provide plans for funding in the event that adequate privatization funds are not provided. This will be especially important for future projects that must be implemented to meet compliance milestones which are reliant on privatization funding. INEEL examples that concern us include the Advanced Mixed Waste Treatment Project and the interim dry storage for Spent Nuclear Fuel.

(B-7) The INEEL CAB recommends that DOE identify budgets for all unfunded mandates as soon as possible. We are concerned that unfunded mandates jeopardize the budgets for all projects. One example is the Foreign Research Reactor (FRR) project at the INEEL. Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should include information on program performance that allow a comparison between what each site is expected to do over the year and what it was unable to complete as a result of unfunded mandates.

(B-8) The INEEL CAB recommends that DOE provide a better explanation of the differences in costs and schedules presented in Exhibit 2-10 of the *Paths to Closure* national volume. (The exhibit illustrates how the *Draft Paths to Closure* document differs from the previously released *Focus on 2006* discussion *Draft*.) We noted, for example, that DOE now predicts that Savannah River Site will be cleaned up much more quickly than it was thought a year ago, with little added cost. By contrast, Oak Ridge will be cleaned up a little more slowly, but the cleanup will be significantly more costly than previously thought. Hanford and Rocky Flats will be cleaned up more quickly and for less money. The pattern is not apparent and the oversimplified explanation is not very helpful.

LOW-LEVEL WASTE PROGRAM RECOMMENDATIONS

The INEEL CAB submits the following recommendations with regard to the low-level waste (LLW) program as it is portrayed in the *Draft Paths to Closure* document.

(LLW-1) The INEEL CAB recommends that DOE clarify the strategic direction for the LLW program by promptly issuing the LLW Record of Decision (ROD) for the Programmatic Environmental Impact Statement (PEIS) for the WM program. Timely completion of the ROD will not only allow for resolution of the TBD dispositions for specific wastes in the LLW program, but will also allow for more efficient and responsible management of the overall program.

(LLW-2) The INEEL CAB recommends that DOE-ID continue disposal of LLW at the Subsurface Disposal Area (SDA) only if it is consistent with the final remedial action selected for the SDA under the ER program. If the final remedial action selected for remediation of the SDA will involve removal of LLW from the SDA, disposal of LLW should not continue at the SDA and DOE should make provisions for interim storage.

(LLW-3) The INEEL CAB recommends that DOE-ID continue its plans to close down disposal of contact-handled LLW at the SDA by 2006 and remote-handled LLW disposal at the SDA by 2008.

(LLW-4) The INEEL CAB recommends that DOE-ID develop contingency strategies for contact-handled LLW disposal at INEEL after 2006 and remote-handled LLW disposal at INEEL after 2008 in case appropriate off-site disposal sites are not available.

(LLW-5) The INEEL CAB recommends that DOE consider the possibility of managing LLW under a strategy based on the duration of the radioactive waste half-lives.

(LLW-6) The INEEL CAB recommends that DOE develop a contingency strategy for LLW treatment in case the agency is not able to favorably resolve the current litigation with Waste Control Specialists. This litigation could threaten the agency's ability to contract for LLW treatment at a commercial LLW treatment facility if the litigation has not been resolved by the time the Waste Experimental Reduction Facility (WERF) shuts down as planned in 2003.

MIXED LOW-LEVEL WASTE PROGRAM RECOMMENDATIONS

The INEEL CAB submits the following recommendations with regard to the mixed low-level waste (MLLW) program as it is portrayed in the *Draft Paths to Closure* document.

(MLLW-1) The INEEL CAB recommends that DOE clarify the strategic direction for the MLLW program by promptly issuing the MLLW ROD for the PEIS for the WM program.

(MLLW-2) The INEEL CAB recommends that DOE develop a contingency strategy, including funding requirements, for treatment of MLLW in case the Advanced Mixed Waste Treatment Project (AMWTP) does not proceed as presently scheduled.

(MLLW-3) The INEEL CAB recommends that DOE develop a contingency strategy for MLLW disposal in case the agency is not able to favorably resolve the current litigation with Waste Control Specialists. This litigation threatens the agency's ability to contract for disposal of MLLW slated for disposal at a commercial Subtitle C disposal facility.

(MLLW-4) The INEEL CAB recommends that DOE-ID upgrade and maintain the WERF in an operational state as long as the facility is cost-effective, it can be permitted, and it can be operated safely within regulatory guidelines. Due to the difficulties involved in permitting new incineration facilities, DOE is urged not to shut down WERF until a viable complex-wide alternative is operational.

HIGH-LEVEL WASTE PROGRAM RECOMMENDATIONS

The INEEL CAB submits the following recommendations with regard to the high-level waste (HLW) program as it is portrayed in the *Draft Paths to Closure* document.

The INEEL CAB prefaces their recommendations on the HLW program by noting that the INEEL HLW Baseline Disposition Map presently portrays the program baseline. An EIS for the HLW program is ongoing and will evaluate alternatives that may be preferred to those in the baseline and may be selected in the ROD. For example, grouting the low-activity waste back into the tanks may not be supported by the ROD for the EIS. We request a continuing opportunity to review the status of the HLW EIS along with pertinent supporting documentation.

(HLW-1) The INEEL CAB recommends that DOE-ID continue Resource Conservation and Recovery Act (RCRA) permitting activities for HLW processing (including the calciner) so that the specific EIS alternative ultimately selected for inclusion in the ROD can be implemented with no delay in the program. Any delays would reduce DOE's ability to comply with the Idaho Settlement Agreement.

(HLW-2) The INEEL CAB recommends that DOE resolve the question concerning sodium-bearing waste categorization and ensure that the resolution is consistent with the language in the Idaho Settlement Agreement.

(HLW-3) The INEEL CAB recommends that DOE clearly distinguish HLW from sodium-bearing waste and MLLW throughout the *Paths to Closure* document and on the INEEL HLW Baseline Disposition Map. The map states that the INEEL has 10,000 m³ of HLW. Our understanding is that 4,000 m³ of calcine meets the legal definition of HLW, whereas the balance (about 6,000 m³) does not meet that definition.

(HLW-4) The INEEL CAB recommends that DOE-ID consider alternatives to its decision to calcine. While calcining reduces short-term risks, it doesn't appear to make sense to calcine the remaining 1.4 million gallons of sodium-bearing liquid waste and then dissolve the calcine prior to treatment.

(HLW-5) The INEEL CAB recommends that the budget presented in the *Paths to Closure* document for the INEEL HLW program be reconsidered. There is an apparent disconnect between the budget presented in the draft document and what is currently budgeted for the HLW program at the INEEL. The budget should be consistently presented.

TRANSURANIC WASTE PROGRAM RECOMMENDATIONS

The INEEL CAB submits the following recommendations with regard to the transuranic waste (TRU) program as it is portrayed in the *Draft Paths to Closure* document.

(TRU-1) The INEEL CAB recommends that DOE develop contingency plans in case any one or combination of the following conditions cannot be met—all of which are necessary to ensure that the TRU program will meet the terms of the Idaho Settlement Agreement:

The Waste Isolation Pilot Project (WIPP) must open as planned and DOE must resolve any legal actions filed against the facility promptly,

WIPP must get a RCRA Part B Permit to allow acceptance of those TRU wastes at the INEEL that have hazardous components,

Funding for the AMWTP must be adequate (regardless of the future of privatization funding),

The WIPP enabling documentation and the WIPP waste acceptance criteria (WAC) must be changed to allow for the disposal of all TRU waste to which DOE holds title (without regard to point of origin) and all wastes that are managed as TRU waste by DOE (because of comparable health and safety risks), and

DOE must give INEEL priority for receipt of the available TRUPACTs (shipping containers certified for the shipment of TRU wastes) if the number of those containers will limit the ability to support shipment of TRU to WIPP in accordance with the schedule outlined in the Idaho Settlement Agreement.

(TRU-2) The INEEL CAB recommends that DOE-ID develop a contingency plan for treatment of TRU waste in the SDA in case the contract option for the AMWTP is not exercised.

(TRU-3) The INEEL CAB recommends against building duplicate processing facilities for TRU waste at other DOE sites as we feel such construction would constitute an unnecessary expense. In order to limit the number of shipments to the INEEL to the extent possible, TRU waste that can be treated at the site of generation should be.

ENVIRONMENTAL RESTORATION PROGRAM RECOMMENDATIONS

The INEEL CAB submits the following recommendations and one comment with regard to the wastes resulting from cleanup efforts conducted under the ER program as portrayed in the *Draft Paths to Closure* document.

(ER-1) The INEEL CAB recommends that DOE-ID conduct ER projects across the INEEL and within each waste area group (WAG) at the INEEL in accordance with a prioritization based on the risks that are posed to human health and the environment.

(ER-2) The INEEL CAB recommends that DOE-ID develop its ER budget at the INEEL on a conservative basis to provide assurance that the total volumes can be managed responsibly. We are not confident that the volumes listed for the various waste streams resulting from the ER program are accurate nor that the budget estimates for the program are accurate for out-years.

(ER-3) The INEEL CAB recommends that the *Paths to Closure* document include cost estimates for the Remedial Investigation/Feasibility Study and Remedial Action of the Tank Farm Soils.

(ER-4) The INEEL CAB recommends that DOE based cost estimate for cleanup of Pit 9 in the *Paths to Closure* document on DOE-ID's estimate of costs for remediation under the contingency plan. The cost estimate presently reflects the fixed-price privatization contract that is under dispute. We are concerned that the \$132 million that was set aside for the privatization contract for remediation of Pit 9 will not result in effective cleanup.

(ER-5) The INEEL CAB recommends that DOE use a planning scenario of 100 years before residential land use will occur in the vicinity of existing facilities at the INEEL. We support the planning basis that would prevent residential use for 100 years. That planning basis should be uniformly applied throughout the INEEL.

In addition, we offer one comment on the ER program as it is portrayed in the document. The INEEL CAB is uncomfortable with the plan to continue pump-and-treat operations at Operable Unit 1-07B at Test Area North as a long-term solution. We look forward to the results of the treatability studies currently being conducted to identify remedial alternatives. We are hopeful that a remedial alternative will be identified that will be less costly and more effective than the pump-and-treat operation.

SPENT NUCLEAR FUEL PROGRAM RECOMMENDATIONS

The INEEL CAB submits the following recommendations with regard to the spent nuclear fuel (SNF) program as it is portrayed in the *Draft Paths to Closure* document.

(SNF-1) The INEEL CAB recommends that DOE develop a contingency plan in case it is not possible to implement the present plan for procurement, construction, and licensing of SNF dry storage facilities in time to meet the commitments in the Idaho Settlement Agreement.

(SNF-2) The INEEL CAB recommends that the section on the INEEL's Integrated SNF program be rewritten. It presently lacks sufficient detail to provide the reader with an understanding of the Dry Storage Project (privatized or otherwise). The technology development required for the "dry interim storage and preparation for offsite repository disposal" is not described. It is also unclear what the "new privatized dry transfer system and modular storage facility" is and how it fits into the Dry Storage Project.

(SNF-3) The INEEL CAB recommends that DOE provide adequate funding for privatization projects supporting the SNF program. We are concerned about the future availability of funding for privatized projects.

(SNF-4) The INEEL CAB recommends that DOE develop contingency plans in case lawsuits threaten its ability to meet compliance milestones. In particular, we are concerned about the impact from lawsuits related to the FRR project.

(SNF-5) The INEEL CAB recommends that DOE develop a contingency plan in case there is no repository available to receive all of the SNF from of Idaho by 2035 in accordance with the Idaho Settlement Agreement.

(SNF-6) The INEEL CAB recommends that DOE-ID develop a contingency plan for sodium-bonded fuel at ANL-West in case the current research and development efforts fail to identify an effective treatment technology that is acceptable to stakeholders.

BASELINE DISPOSITION MAP RECOMMENDATIONS

The INEEL CAB makes the following recommendations with regard to the baseline disposition maps:

(BDM-1) The INEEL CAB requests that DOE (1) modify the baseline disposition maps to reflect it's own review and incorporation of non-technical considerations (including regulatory, political, equity, and stakeholder considerations) or (2) DOE issue an explanation to the SSAB chairs as to why those considerations did not impact on the waste dispositions portrayed on the baseline disposition maps previously released in the *Contractor Report to the DOE on Environmental Management Baseline Programs and Integration Opportunities (Contractor Report)*. DOE-Headquarters personnel made a commitment to the Site-Specific Advisory Board chairs at the October 29-30, 1997 meeting that DOE would review the baseline disposition maps prepared by the contractors and incorporate non-technical considerations into the baseline disposition maps included in this revision of this document. It is not apparent that this commitment was carried out.

(BDM-2) The INEEL CAB recommends that DOE continue to make every effort to ensure the baseline disposition maps can be easily understood by the public. We suggest, for example, that the maps do not need to present all of the information needed by system engineers. The maps should be tied to more detailed information for those who want it, however.

(BDM-3) The INEEL CAB recommends that DOE provide what is known about waste forms and the expected range of volumes for "To-Be-Determined" quantities of wastes on the baseline disposition maps.

(BDM-4) The INEEL CAB recommends that all of the baseline disposition maps should be consistently designed and formatted and all hand-offs of wastes within sites and between sites should be correctly and consistently portrayed.

(BDM-5) The INEEL CAB recommends that the baseline disposition maps indicate when new facilities will be required to fulfill treatments depicted on the maps. The funding for new facilities will always be less certain than for existing facilities.