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Comments on the Draft Long -Term Stewardship Study
December 15, 2000

Comments Prepared by Tom Marshall, Coordinator, Rocky Flats and Disarmament Program, Rocky Mountain Peace and Justice Center

Presented to: Mr. Steven Livingstone, Project Manager
U.S. Department of Energy,
P.O. Box 45079
Washington, D.C. 20026-5079

The Rocky Mountain Peace and Justice Center (RMPJC) appreciates the opportunity to comment on the *Draft Long -Term Stewardship Study (Draft Study)*. RMPJC is a non-profit, public interest organization located in Boulder Colorado. Since our inception in 1983 we have had a focus on issues pertaining to the production and maintenance of nuclear weapons, and the health and environmental issues associated with the production of nuclear weapons. We maintain a particular focus on the Rocky Flats nuclear weapons plant (Rocky Flats), being located just eight miles from the facility.

The *Draft Study* along with report to Congress mandated by the National Defense Authorization Act signal a good beginning on the part of DOE to grapple with the challenge of long-term stewardship. The *Draft Study* does a good job of outlining the nature of the problem at DOE sites that necessitates long-term stewardship, and articulating the challenges and questions that need to be addressed in developing a long-term stewardship program. We hope that our comments will assist in the process to improve the *Draft Study* and further the Department of Energy's (DOE) efforts pertaining to long-term stewardship of its contaminated facilities throughout the country.

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24.1 – The Department appreciates this comment. Thank you.

Political Commitment/Institutional Issues

DOE has stated that 108 sites will need some form of long-term stewardship after active remediation is done. Many of these sites cover large areas that will remain contaminated with a host of radioactive and other hazardous materials. In many cases remaining contamination will exist in soils, waters, and building or portions of buildings at sites. In some cases waste disposal facilities will exist on sites. Many of the contaminants will be long-lived. For example one of the primary contaminants of concern at Rocky Flats is plutonium which remains dangerously radioactive for 240,000 years. As the *Draft Study*

notes (as well as the National Research Council report *Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites*), physical controls and institutional controls that will be left will fail during the dangerous life of long-lived contaminants. Building a robust long-stewardship program is essential if we are to protect the health of the surrounding public and of the environment.

The Department of Energy and the U.S. public face a number of challenges in developing a robust long-term stewardship program. Many of these including funding, regulatory challenges, transmitting information about hazards over extremely long periods of time, shortcomings in technology, and lack of precise knowledge about the nature of hazards at sites are addressed in the *Draft Study* and will be commented on later. However, in order to deal with all of these challenges it is imperative that there be a strong national commitment to developing a long-term stewardship program. 24.2

Developing this commitment will require a strong advocate within the federal government. it is not clear that DOE can be this advocate. The report *Long-Term Stewardship and the Nuclear Weapons Complex: The Challenge Ahead* puts the problem well:

> "The EM program is under tremendous pressure to show progress, and this means 'cleanup.' It will be difficult for the department to propose to Congress a new, expensive stewardship program to continue to take care of EM sites, when DOE has been pushing the notion that cleanup is done, or will be soon." (RFF p.21)

The assertion in the *Draft Study* that "cleanup," "end state," and "closure" do not imply removal of all hazards this is false. To most people including many decision makers in government these terms do have that implication. Only a small number of people who pay close attention to this issue understand that when DOE says "cleanup" it does not necessarily mean cleanup. In order to build the will to develop and support a long-term 24.3

nature of the problem facing the nation. Language used to describe [illegible] at DOE sites needs to accurately reflect the nature of the work, the problem being addressed, and remaining site hazards. This problem is particularly acute at sites such as Rocky Flats where the DOE is promising "cleanup" and "closure" by 2006, and yet where significant contamination problems will persist.

It is important that the Department of Energy, and its regulator begin to speak candidly and plainly about the nature of persisting hazards presented by DOE sites. It is not clear that DOE will be able to overcome the tensions created by the fact that they are actively "selling" cleanup as a solution to the Congress and the public. Another tension exists in the DOE's role in developing and maintaining nuclear weapons. Since these activities will likely create more contamination and new long-term stewardship needs and costs, 24.4

24.2 – The Department acknowledges this comment in a text box in Section 4.2 of the Study. The Department's Long-term Stewardship Working Group recently identified the need for a corporate vision for long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. The corporate vision includes the appropriate organizational structure for long-term stewardship within the Department. The Department also recognizes that it is important to define long-term stewardship roles and responsibilities both within DOE and between DOE and other entities, including other federal agencies, states, Tribes, and regional governments. The Executive Steering Committee is developing a Strategic Plan for long-term stewardship; part of that effort will include identifying roles and responsibilities within DOE. The Department also notes that long-term stewardship as an issue is broader than DOE sites. For example, states and local governments already have long-term stewardship responsibilities at municipal landfills, and states will have long-term stewardship responsibility for "Superfund-lead" sites on the CERCLA NPL. Implementation of long-term stewardship across this broad spectrum of sites will require states to develop their own, independent capability to provide long-term stewardship.

24.3 – The Department acknowledges this comment in a text box in Section 2.1 of the Study. The Department agrees that the terms "cleanup," "end state," and "closure" are less than ideal. The term "cleanup" is a common word usage that can be confusing. To help clarify the limits of current cleanup technologies and the overall scope of long-term stewardship, the Department has added a text box to Chapter 2 of the Study that describes the limitations and challenges that preclude remediating many sites to levels that would permit unrestricted use; the types of residual hazards that will require long-term stewardship; the time frames that may be involved in long-term stewardship; and the activities that may be involved in long-term stewardship. The Report to Congress on Long-term Stewardship provides additional site-specific information on the projected scope of long-term stewardship. The Department also maintains a Web Site (http://lts.apps.em.doe.gov) that provides public access to numerous documents describing the scope and challenges associated with long-term stewardship. The Department's Long-term Stewardship Working Group recently identified the issue of developing a consistent, consensus definition of long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee.

24.4 – The Department recognizes public concerns about residual site hazards and has acknowledged this comment in a text box in Section 3.2 of the Study. Information on the nature of residual hazards and their potential adverse effects on health, welfare, and the environment should be appropriately available to the public. The Department's Long-term Stewardship Working Group recently identified public involvement as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This issue includes how DOE should balance the need to involve the public in maintaining controls (e.g., institutional controls such as water use restrictions) with competing needs such as classified information or activities, particularly at sites with ongoing national security missions.

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most part presented the issue in clear and graphic language. To the degree that the Study can be strengthened and isolated from the politics surrounding continuing nuclear weapons development and the current "cleanup" program we all win. DOE should consider establishing a Long-Term Stewardship program or strong agency within the

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new entity focused on long-term stewardship. Such a move would eliminate the problem of competing missions, may enhance the political fortunes of a long-term stewardship program. Such a move might also increase the sharing of ideas an approaches to similar problems that may currently be impeded by institutional barriers. DOE should actively explore this possibility with other agencies and the public as it develops a long-term

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The *Draft Study* clearly states that "The need for long-term stewardship reflects the [illegible] Long-term stewardship is necessary [illegible]

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[illegible] that uninjected [illegible] the long-term goal for sites should be complete removal of dangerous contaminants.

24.5 – See response to Comment 24.2.

24.6 – See response to Comment 24.2.

24.7 – The Department evaluated the specific suggestion made in this comment but chose not to revise the Study in response.

24.8 – The Introduction to the Study provides an overview of what the Department is doing to address long-term stewardship issues.

24.9 – The decision to clean up to unrestricted use, or to meet other specific land use requirements, is made on a site-specific basis with input from regulators, stakeholders, and the public. It is both DOE and EPA policy that cleanup remedies should be consistent with the intended future use of the affected areas. Chapter 2 of the Study includes a new text box that provides a more formal statement on the scope of long-term stewardship and why it is required (i.e., the inability to achieve unrestricted use and the nature of residual hazards). The goal of long-term stewardship is to ensure continued protection of human health and the environment consistent with applicable requirements. The Department recognizes the many issues and public concerns associated with the uncertainties with planning for, documenting, and funding long-term stewardship throughout the Study and acknowledges this comment by including it in a text box in Section 3.2 of the Study.

Improving the condition of sites with goal of eliminating hazards needs to be a central component of a long-term stewardship program. The graphic on p. 112 of the *Draft Study*, "The Dynamic Nature of Long -Term Stewardship" captures the essence of this idea. Research should continue into new technology to improve the condition of sites, and this technology should be used when it is developed. There need to be frequent (shorter than five years) periodic assessments of new technologies and site conditions. It is not apparent is that there is a design for an active R&D program. Without such an active program it is likely that research and site improvement will not occur. 24.10

DOE should begin now to identify all R&D needs for long-term stewardship. At sites where hazards will remain DOE should document very clearly where remediation efforts leave residual contaminants, the nature of these contaminants, any problems they may pose, and the reason that these contaminants will be left (e.g. inadequate technology, cost, etc.). This record should be detailed but understandable to the lay person. It should also indicate clearly what technology needs exist to improve the condition of the site. These records can serve as baseline for research and development program aimed at better understanding the nature and behavior of contaminants at sites and at developing technology to improve the condition at sites. An R&D program should also consider monitoring and sampling techniques, [redacted] information management. It should be noted that DOE can begin building an R&D baseline and implementing the program before sites end active remediation. Upon the end of active site remediation records should be reviewed and updated. Long-term stewardship requirements should be an integral part of current R&D at the site and national level. To facilitate this effort, DOE should immediately provide a list of all current R&D efforts that pertain to long-term stewardship and describe what problem they address. 24.11 24.12 24.13 24.14

Current long-term stewardship research is being coordinated out of Idaho. This is not a wise approach. Research should be coordinated at the national level out DOE headquarters (or wherever long-term stewardship authority lays). However, DOE should also establish site level programs that involve local universities and colleges, members of the community, state and local government, and other federal entities. A site such as [redacted] project for such an R&D program. In addition to providing a [redacted] hazards at the site, and possibly improving the condition of the site, a site level R&D program will help the community remember the hazardous nature of the site. This is an additional reason for having a site level R&D program as well as a national R&D program focused on long-term stewardship needs. 24.15

The *Draft Study* refers to technology and R&D needs, however, it does not clearly state what is being done to assess and fulfill these needs. This is an area that can strengthened in the *Draft Study*.

Cost and Funding

24.10 – The Department acknowledges this comment in a text box in Section 10.2 of the Study. The Department agrees that remedies may need to be reassessed periodically in light of changing circumstances and information. Section 10.2 of the Study includes a discussion of these points.

24.11 – The Department acknowledges these comments in a text box in Section 4.2.4 of the Study. As noted in Section 4.2.4 of the Study, the Department's process for developing and implementing new science and technology includes developing a long-term stewardship science and technology roadmap that will (1) identify science and technology needs; (2) identify existing capabilities to meet these needs both within and external to DOE; (3) determine research and development priorities; and (4) direct specific efforts to meet these needs. The Department agrees that research into a number of key areas is needed, including the long-term effectiveness and reliability of engineered and institutional controls; surveillance and monitoring; and information management. Advances in science and technology may provide future generations with the ability to cost-effectively achieve unrestricted use at some sites. The Department's Long-term Stewardship Working Group recently identified the policy issue as to whether the ultimate goal of new science and technology should be to improve the ability to maintain the existing end state (i.e., the end state established during cleanup) or should be to "improve" the end state more closely toward unrestricted use as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee.

24.12 – See response to Comment 24.11.

24.13 – See response to Comment 24.11.

24.14 – See response to Comment 24.11.

24.15 – See response to Comment 24.2.

Establishing a robust long-term stewardship program will require significant and assured funding. The best mechanism for this is not clear. However, it is important that dedicated funding be established by the federal government. Annual appropriations are not a reliable or responsible funding mechanism for this national obligation. It is important that the federal government own the responsibility for safeguarding contaminated DOE sites, and for funding any associated work. While this will be difficult, building the political will to make it happen will be easier if DOE and its regulators are clear about hazards at DOE sites. 24.16

Getting the best possible estimate of costs will be important in arranging dedicated funding. These estimates will clearly change as knowledge is gained regarding long-term stewardship needs. The cost estimates in the NDAA report should be incorporated into the *Draft Study*. Those estimated costs are approximately $100 million. It appears that this estimate is low, perhaps by a large margin. In part this may be due to reliance on sites to provide cost estimates. Sites such as Rocky Flats have an incentive to demonstrate low post-remediation costs. Therefore, DOE should commission an independent assessment of long-term stewardship costs. 24.17

Owning the responsibility for long-term stewardship at DOE sites means that the federal government should maintain ownership of theses sites. In some cases, there may be lease or other [illegible] with other entities. However, maintaining ownership of the sites is important. This ownership should [illegible] mineral rights that lie below the site. At Rocky Flats the federal government does not own the mineral rights. The [illegible] success of a long-term stewardship program at the site. 24.18

Information Management

Without significant advances in technology, information about hazards at sites will have to be passed far into the future. Since we cannot anticipate cultural, economic, or environmental changes that will affect peoples behavior or values pertaining to these sites in the future, it is best to think about establishing an iterative program that is passed from [illegible] Rather than being passive curators of site information, these museums should be educational and research centers that work with the above mentioned site R&D programs. They should involve educational institutions, local governments, and community representatives in design and operation of their programs. One of their functions should be to explore the maintenance institutional controls and transmitting information far into the future. The basic idea is that an active program that involves the community is more likely to ensure that hazards are remembered than a passive program that relies on records stored in a variety of formats at different repositories. It is vital that affected communities be actively involved in this program and grappling with the problems posed by the sites in their area if the problem is to be addressed for the long-term. 24.19

Public Involvement

24.16 – The Department acknowledges this comment in a text box in Section 8.2 of the Study. The Department currently relies on the annual appropriations process to fund long-term stewardship. This is not likely to change in the near term. As noted in Section 8.1 of the Study, a separate Project Baseline Summary (PBS) for long-term stewardship at each site will help the Department improve its estimates of annual long-term stewardship funding requirements. Developing an alternative funding mechanism will require additional study and eventually Congressional action. The Department's Long-term Stewardship Working Group recently identified funding of long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. Specific funding issues identified by the Working Group included: (1) current difficulties in determining long-term stewardship costs now and in the future because there is no consistent procedure for how long-term stewardship activities are budgeted for and reported among DOE sites; (2) whether the annual appropriations process is the most effective mechanism for funding long-term stewardship activities that may be needed for decades or centuries; and (3) circumstances under which DOE should consider funding external parties (e.g., local governments) to conduct long-term stewardship activities or oversight. This comment will be forwarded to the Executive Steering Committee for their consideration.

24.17 – The Department issued the National Defense Authorization Act (NDAA) Report, entitled A Report to Congress on Long-term Stewardship, in January 2001 (DOE/EM-0563). The Report to Congress and the Study were prepared as separate documents because the required scope for each was different. The primary focus of the Report to Congress was site-specific requirements; the primary focus of the Study was common national issues. Nonetheless, the two reports are complementary to one another, and the public is encouraged to read both documents. The Report to Congress can be useful for certain common long-term stewardship analysis, such as evaluating long-term stewardship needs. Similarly, the Department has added a text box to Chapter 2 of the Study providing an overview of the overall scope of DOE's long-term stewardship responsibilities. The cost estimates from the Report to Congress have been incorporated into Section 8.1 of the Study. They were not in the Draft Study because the cost information in the Report to Congress was not final prior to publication of the Draft Study. The Department anticipates that life-cycle cost estimates will improve over time as DOE moves forward with planning and implementing long-term stewardship. For the Report to Congress, each site was strongly encouraged to work with local stakeholders during the preparation of site-specific cost estimates. The Study is not the appropriate document to respond to specific comments on the Report to Congress or on the public comment process used to develop the Report. The Department encourages members of the public to comment on their respective site's cost estimate through established public involvement mechanisms at each site.

24.18 – This comment is acknowledged in a text box in Section 6.2 of the Study. Section 6.2 of the Study recognizes the many issues, public concerns, and uncertainties associated with ensuring the continued provision of long-term stewardship after property transfers. The Department's Long-term Stewardship Working Group recently identified the issue of how DOE will ensure adequate protection of human health and the environment at sites transferred to the private sector as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This comment will be provided to the Executive Steering Committee for their consideration.

24.19 – This comment is acknowledged in a text box in Section 7.2 of the Study. The Department agrees that museums may be a way to meet legal requirements to maintain an information repository and to provide knowledge about sites to communities during long-term stewardship. Museums already exist at certain DOE sites (e.g., Sandia National Laboratory, Los Alamos National Laboratory, Oak Ridge National Laboratory, and the Hanford Site), although information management is not currently part of their mission. The advantages and disadvantages of establishing a museum need to be assessed on a site-specific basis, since museums are not appropriate for all sites. The establishment of an information repository is a separate mission but could be incorporated with the development of a museum, visitor's center, or library. The Department agrees with the specific comment that a discussion of museums is not "out of scope" and has included such a discussion in Section 7.2 of the Study. Any decision to establish a museum at a specific site would need to consider issues such as mission, location, and funding sources, but the Department has not developed a policy on this. This comment will be provided to the senior management Long-term Stewardship Executive Steering Committee for their consideration.

The public, and local and state governments should be actively involved in designing and maintaining a robust long-term stewardship program. In the near term, a system of community boards connected to a national board should help guide the development and implementation of long-term stewardship activities. Funding for these boards should be provided by DOE, but DOE should not direct these boards. In some instances current Citizen Advisory Boards may fill this function locally, but not in all cases. It is important that members of these local boards serve on the national board. Local governments should also be closely involved with long-term stewardship planning and implementation. 24.20

Implications For New and Continuing Facilities

Approximately fifty years of experience with nuclear weapons production demonstrates that contamination will result from these activities and this will necessitate long-term stewardship of these sites. Assessment of anticipated long-term stewardship needs should occur whenever DOE decides to construct and operate any new facility. At this time funding should be set aside for long-term stewardship activities. DOE should also conduct such an assessment on currently operating facilities and set aside adequate funds for long-term stewardship activities that will be required at these sites. 24.21

Again, the Rocky Mountain Peace and Justice Center appreciates the opportunity to provide comment on the *Draft Long-Term Stewardship Study*. We trust you will find these comments helpful. If you have any questions please contact Tom Marshall at 303-444-6981.

24.20 – The Department acknowledges this comment in a text box in Section 3.2 of the Study. Existing laws and regulations, especially the CERCLA process that is used for many site cleanups, require public involvement in the activities and decisions that lead to the selection of a remedy (ROD), including the technical and economic feasibility of cleanup to unrestricted use. However, these laws and regulations do not clearly articulate the role of public involvement in the activities and decisions that follow the ROD. At the same time, the Department recognizes that the ultimate success of long-term stewardship depends on the active involvement of the affected parties, including local governments and Tribes. It is important for all parties to develop a workable approach for meaningful public involvement in the decisions that affect and manage long-term stewardship activities. The Study identifies this as an additional key challenge associated with long-term stewardship. The Department's Long-term Stewardship Working Group recently identified public involvement as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This issue includes how DOE should balance the need to involve the public in maintaining controls (e.g., institutional controls such as water use restrictions) with competing needs such as classified information or activities, particularly at sites with ongoing national security missions. The Department's Long-term Stewardship Working Group also has identified the issue of under what circumstances DOE should consider funding of external parties as one of the most important issues that should be addressed by the Executive Steering Committee. Although the general issue of public involvement has been identified to the Executive Steering Committee, specifics of implementation (e.g., what external organizations should be involved, what should be provided by DOE, what mechanisms for public involvement should be used) have not been discussed and may be determined on a site-specific basis. We intend for the public participation process to allow for meaningful Tribal and public involvement.

24.21 – The Department acknowledges this comment in a text box in Section 8.2 of the Study. As noted in Section 8.2 of the Study, developing an alternative funding mechanism will require additional study and eventually Congressional action. Section 8.2 of the Study also provides a summary of the recent study of Trust Funds by Resources for the Future. The Department's Long-term Stewardship Working Group recently identified funding of long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. Specific funding issues identified by the Working Group included: (1) difficulties in determining long-term stewardship costs now and in the future because there is no consistent procedure for how long-term stewardship activities are budgeted for and reported among DOE sites; (2) whether the annual appropriations process is the most effective mechanism for funding long-term stewardship activities that may be needed for decades or centuries; and (3) circumstances under which DOE should consider funding external parties (e.g., local governments) to conduct long-term stewardship activities or oversight. This comment will be forwarded to the Executive Steering Committee for their consideration.

STATE OF MISSOURI
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December 15, 2000

Mr. Steven Livingston, Project Manager
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U. S. Department of Energy
P.O. Box 45079
Washington, D.C. 20026-5079

RE: Draft Long-Term Stewardship Study

Dear Mr. Livingston:

We welcome this opportunity to provide comments on the issue of long-term stewardship. Decisions on this critically important issue will directly impact the state of Missouri. Weldon Spring, the St. Louis city and county uranium refining wastes, the Kansas City Plant, and the uranium fuel fabrication plant in Jefferson County will all require long-term stewardship.

To meet our obligations to future generations, we must strive to return as many contaminated properties to unrestricted use as possible. We acknowledge it is not possible to achieve this goal at all sites due to technological and cost limitations. This is precisely why long-term stewardship plays such a key role in responsible care of the earth. Long-term stewardship is critical to preventing off-site migration of contamination. However, the general philosophy under which it is implemented will provide the basis for judgement by future generations of our success or failure as wise caretakers of the land. We must make careful, thoughtful choices to ensure the legacy all would desire. 25.1

With that in mind, long-term stewardship should be designed to provide the maximum protection of public health and environment for those sites whose complete remediation to unrestricted use is not feasible. Reliance on institutional controls should be minimized given the limited value they have shown in past experiences. Additionally, any stewardship plan should be dynamic and provide the maximum degree of adaptability to advances in technology. 25.2

To ensure consistency and commitment to agreed objectives of a stewardship program, the federal government needs to take the leadership role in these endeavors and partner with state and local entities to ensure goals are met. The federal government is in the best position to 25.3

25.1 – As noted in Section 4.2.2 of the Study, site-specific long-term stewardship plans are required by law for uranium mill tailings sites and must be approved by the Nuclear Regulatory Commission. The Department also requests the development of a site-specific long-term stewardship plan before accepting long-term stewardship responsibilities for any site. As the EM mission at a site is completed, current plans call for the EM program and the site landlord (if different from EM) to develop a long-term stewardship baseline for each site. The baseline will describe the scope of applicable long-term stewardship requirements, the technical activities and the projected schedule to meet these requirements, and expected costs. The Department acknowledges these comments in a text box in Section 4.2 of the Study and will consider the recommendations they provide in developing the guidance that will specify the format and content for site-specific long-term stewardship plans.

25.2 – The Department acknowledges this comment in Section 5.3 of the Study. The Department agrees that the primary purpose of LTS is continued protection of human health and the environment. The Department agrees that in some cases, site-specific LTS plans may need to include provisions for distributing public health information to affected parties, and, where appropriate, plans for health monitoring. A new text box at the end of Chapter 2 of the Study discusses the importance of public health concerns during long-term stewardship. With respect to care and compensation, such decisions would need to be made on a case-by-case basis.

25.3 – The Department acknowledges this comment in a text box in Section 4.2 of the Study. The Study has included examples of successful efforts to assist individual sites in establishing these partnerships. Developing partnerships, however, is both difficult and time-consuming, and it may be years before partnerships function smoothly. Potential options for managing long-term stewardship include a centralized agency to steward Federal sites. However, a detailed discussion of the advantages and disadvantages of such a centralized agency is beyond the scope of the Study, which is required to focus on DOE sites.

evaluate the emergence of new technologies, record-keeping and monitoring methods and the general implementation of programs nationwide. This will help avoid duplication of pilot program and evaluation efforts and facilitate determining the best available methods for application at sites nationwide.

Past experiences have illustrated the need for careful planning to ensure sites requiring long-term stewardship are managed prudently now and in the future. As with any issue of such magnitude and importance, assurance of adequate resources to carry out the continuing responsibilities associated with these sites is of great importance. The federal government is in the best position to ensure adequate funding mechanisms are developed to aid stewardship partners in achieving long-term stewardship goals. 25.4

We applaud the work you and others within the Department of Energy have undertaken in producing the long-term stewardship study. It appears you have met the goals of clearly describing the stewardship issues and providing a forum for public input to the study. Department of Energy now needs to focus on its responsibility to implement policies for achieving a sound and sustainable stewardship plan. A robust long-term stewardship program, operated by the U.S. Department of Energy, is an integral part of the overall plan to address these sites. Paramount to laying the groundwork for the best possible program design is inclusion of the general public and state and local governments in planning, implementation and evaluation processes. Please consider and include this letter with attached comments as part of the official record and review of the Federal Register Notice, issued on October 31, 2000. 25.5

Enclosed are specific comments on the draft study. Our major recommendations for the study follow:

- Department of Energy needs to commit to issuing a policy that supports stewardship funding. An additional mechanism for funding to those shown on pages 86 and 87 would be the establishment of an entitlement fund or an Executive Order requiring sufficient funding. 25.6
- Ensuring the provisions of a stewardship plan are met needs to be a joint effort involving all stakeholders. This includes Department of Energy, state and local governments, the general public, and any other entities that are involved in a site stewardship plan. 25.7
- The Weldon Spring Site Remedial Action Project (WSSRAP) is cited as having a draft plan that includes the state as an "oversight steward." The State of Missouri and Department of Energy have yet to define the exact role of oversight steward. We look forward to discussing this issue with Department of Energy and coming to a mutually agreeable decision on this matter. 25.8

25.4 – The Department acknowledges this comment in a text box in Section 8.2 of the Study. As noted in Section 8.2 of the Study, developing an alternative funding mechanism will require additional study and eventually Congressional action. Section 8.2 of the Study also provides a summary of the recent study of Trust Funds by Resources for the Future. The Department's Long-term Stewardship Working Group recently identified funding of long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. Specific funding issues identified by the Working Group included: (1) difficulties in determining long-term stewardship costs now and in the future because there is no consistent procedure for how long-term stewardship activities are budgeted for and reported among DOE sites; (2) whether the annual appropriations process is the most effective mechanism for funding long-term stewardship activities that may be needed for decades or centuries; and (3) circumstances under which DOE should consider funding external parties (e.g., local governments) to conduct long-term stewardship activities or oversight. This comment will be forwarded to the Executive Steering Committee for their consideration.

25.5 – The Department appreciates this comment. Thank you.

25.6 – See response to Comment 25.4.

25.7 – The Department acknowledges this comment in a text box in Section 3.2 of the Study. Existing laws and regulations, especially the CERCLA process that is used for many site cleanups, require public involvement in the activities and decisions that lead to the selection of a remedy (ROD), including the technical and economic feasibility of cleanup to unrestricted use. However, these laws and regulations do not clearly articulate the role of public involvement in the activities and decisions that follow the ROD. At the same time, the Department recognizes that the ultimate success of long-term stewardship depends on the active involvement of the affected parties, including local governments and Tribes. It is important for all parties to develop a workable approach for meaningful public involvement in the decisions that affect and manage long-term stewardship activities. The Study identifies this as an additional key challenge associated with long-term stewardship. The Department's Long-term Stewardship Working Group recently identified public involvement as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This issue includes how DOE should balance the need to involve the public in maintaining controls (e.g., institutional controls such as water use restrictions) with competing needs such as classified information or activities, particularly at sites with ongoing national security missions. The Department's Long-term Stewardship Working Group also has identified the issue of under what circumstances DOE should consider funding of external parties as one of the most important issues that should be addressed by the Executive Steering Committee. Although the general issue of public involvement has been identified to the Executive Steering Committee, specifics of implementation (e.g., what external organizations should be involved, what should be provided by DOE, what mechanisms for public involvement should be used) have not been discussed and may be determined on a site-specific basis. We intend for the public participation process to allow for meaningful Tribal and public involvement.

25.8 – This comment focuses on site-specific issues. Where these issues have identified general issues for long-term stewardship, the Department has attempted to communicate these issues in both the Draft and Final Study. This comment has been forwarded to the Department's long-term stewardship representatives at the appropriate sites; however, the long-term stewardship study is not the appropriate document for addressing site-specific issues.

- The study rightfully recognizes public input during both plan development and implementation is necessary. Public involvement requirements, which are contained in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), should also be embodied in the stewardship plan. 25.9

- Any proposed transfer of Department of Energy land to other agencies or to the public should require a review and comment by the state first. This should be clarified in Exhibit G-1. 25.10

- The study notes the use of an activity-based cost approach for determining long-term stewardship costs. The state has not been given an opportunity to review or comment on how these costs are derived or whether they are all-inclusive. The stewardship study's companion document, "Long-term Stewardship Report," also provides figures that have not been shared with the Missouri Department of Natural Resources. 25.11

- Government land transfers should be eliminated except in those rare instances where the durability of institutional controls can be guaranteed. Compatible use by others (through leases perhaps) would be acceptable as long as the federal government retained ownership and control of and ultimate responsibility for the institutional controls and other stewardship safeguards. 25.12

The State of Missouri has several sites that will require long-term stewardship. For the protection of Missourians' health and the environment now and in the future, we must insist on playing an active role in all phases of the stewardship for these three sites. Again, thank you for developing this study and for Department of Energy's cooperation as we jointly move to the perpetual care of the Department of Energy wastes. Please contact me at (573) 751-4732 if you [redacted]

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Stephen Mahfood
Director

Enclosure

c: Governor Roger Wilson
Governor-elect Bob Holden
St. Louis FUSRAP Oversight Committee
Weldon Spring Citizens Commission

25.9 – See response to Comment 25.7.

25.10 – This comment is acknowledged in a text box in Section 6.2 of the Study. Section 6.2 of the Study recognizes the many issues, public concerns, and uncertainties associated with ensuring the continued provision of long-term stewardship after property transfers. The Department's Long-term Stewardship Working Group recently identified the issue of how DOE will ensure adequate protection of human health and the environment at sites transferred to the private sector as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This comment will be provided to the Executive Steering Committee for their consideration. Where required by law or regulation, states or their agencies are involved or coordinated with property transfers.

25.11 – See response to Comment 25.8.

25.12 – This comment is acknowledged in a text box in Section 6.2 of the Study. Section 6.2 of the Study recognizes the many issues, public concerns, and uncertainties associated with ensuring the continued provision of long-term stewardship after property transfers. The Department's Long-term Stewardship Working Group recently identified the issue of how DOE will ensure adequate protection of human health and the environment at sites transferred to the private sector as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This comment will be provided to the Executive Steering Committee for their consideration.

The Missouri Department of Natural Resources specific comments to the "Draft Long-term stewardship Study," October 2000, as noted in the Federal Register Notice, October 31, 2000.

1. Page 1: The inset definition of Long-term stewardship is not the same as given on page 4 of the Stewardship Report. 25.13

2. Page 34: The State of Missouri is noted in the inset as having an "oversight steward" role. There has been no definitive discussion with the state to describe what that role will be or how it will be financially supported. 25.14

3. Page 36: The inset here also describes local government as having an "oversight steward" role. Again, we are not aware of any discussion or description of what that role is or how it will be implemented. 25.15

4. Page 49: The inset should include Missouri as having Minuteman Missile Silo sites. 25.16

5. Page 63: Under the **Potential legal restriction** bullet, a provision is needed to include the state as part of the commissions of the transfer or deletion from the National Priority List (NPL). 25.17

6. More effort needs to be taken under Chapter 6: Managing Real Property to portray the management of property already transferred to the public, but not cleaned up. Please refer to the following comment as an example:

The Section titled "Property Transfer" implies: 1) properties are not transferred out of Department of Energy control without cleanup, and 2) long-term institutional controls will be the responsibility of Department of Energy, unless the agency receiving that responsibility is licensed by Nuclear Regulatory Commission (NRC) or an agreement state. Properties not cleaned up are already under public control, short-term institutional controls have transferred to another agency without licensing, and some of the responsibility for short and long-term 25.18

Here's an example:
The St. Louis Formerly Utilized Sites Remedial Action Project (FUSRAP) sites are radiologically contaminated properties that are publicly owned. The cleanup is currently the responsibility of the United States Army Corps of Engineers (USACE). Department of Energy has no involvement with cleanup or controls of those sites. A Memorandum of Understanding (MOU) Department of Energy's exist giving short-term responsibility to USACE and long-term to Department of Energy; however, there is not sufficient specificity to determine how the MOU will be coordinated and implemented. While USACE provides for the removal of contaminated soils and offers radiological support to landowners wishing to make modifications to their site, they have no authority over any action the individual landowner might take. The same principle applies to the right-of-ways, easements, roads, and railroads. While federal support is made available, it is not enforceable. Controls have already become the responsibility of the landowner, the local governments, and utility companies. NRC has not licensed any of these entities and Missouri is not an agreement state.

25.13 – The definition used in the Study is that specified in the Settlement Agreement (see Appendix A). The definition used in the Report to Congress on Long-term Stewardship is that specified in the Committee Report language that directed DOE to prepare the Report to Congress.

25.14 – The text box in Section 4.2.3 of the Study has been modified to note that there is no final agreement between DOE and the State of Missouri concerning roles and responsibilities at the Weldon Spring Site.

25.15 – The inset now reads that the state of Missouri acts as an oversight steward but that no final agreement on roles has been reached.

25.16 – We have added Missouri to the list. Thank you for bringing this omission to our attention.

25.17 – The text has been altered to reflect this comment in a footnote.

25.18 – The Department acknowledges this comment in a text box in Section 6.2 of the Study. Section 7.1 of the Study also notes that on February 11, 2001, the Department made public a list of sites, including beryllium vendors, DOE sites that used radioactive materials, and facilities where atomic weapons workers may have been employed (66 FR 4003). The Department is working on a database for these sites. The Study focuses on common issues and challenges that exist across many sites rather than focusing on one particular subset of these sites.

7. Page 25: A list of principal drivers for existing long-term stewardship requirements at Department of Energy sites is shown. The list should include public and state concern as a driver because, without it, a good number of sites would not have the current federal "Stewardship" practices nor would the site be slated for future requirements. The St. Louis FUSRAP sites are examples of properties that would have no controls in place now or the future, were it not for citizens' concerns and participation. 25.19

25.19 – The Department recognizes public concerns about residual site hazards and has acknowledged this comment in a text box in Section 3.2 of the Study. Information on the nature of residual hazards and their potential adverse effects on health, welfare, and the environment should be appropriately available to the public. The Department's Long-term Stewardship Working Group recently identified public involvement as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This issue includes how DOE should balance the need to involve the public in maintaining controls (e.g., institutional controls such as water use restrictions) with competing needs such as classified information or activities, particularly at sites with ongoing national security missions.

8. The last paragraph of page 56 states: "When the cleanup is complete, Department of Energy conducts appropriate long-term stewardship. If the property is no longer needed for a Department of Energy mission, Department of Energy may transfer it to other federal or non-federal entities." Please consider adding the following statement:

Please note the transference of property to public ownership prior to cleanups and enactment of institutional controls has occurred in the past. This has resulted in additional concerns, problems, and obstacles. 25.20

25.20 – The text has been altered to note that DOE may transfer property only when "DOE environmental, health, safety, and security, and other requirements are met."

General:

1. Costing of Stewardship has not been provided in any of the Record of Decision documents established for the sites in Missouri. 25.21

25.21 – See response to Comment 25.8.

2. Referencing comments 2 and 3 under the specific comments, similar concerns for the FUSRAP and Kansas City Plant Stewardship plans are noted.

3. The Department of Energy Grand Junction Office is indicated as having responsibility for the Weldon Spring Site once cleanup operations have been completed. We understand this may not necessarily be the case. The Department of Energy group responsible for the federal component of Stewardship at WSSRAP is a matter of major importance to the Missouri Department of Natural Resources in planning for the transition from the remediation group. This should be clarified. 25.22

25.22 – See response to Comment 25.8.

The draft Stewardship Plan for WSSRAP is cited as an example of one instance where state government Stewardship roles have been identified. While this document does indicate a role for the state of Missouri, the Department of Natural Resources considers this plan to be a preliminary attempt at preparation of a document that we anticipate will be much more detailed and expansive in final form. While it is true that Missouri has been identified as being an "oversight steward," there has not yet been an attempt to define a funding mechanism for the state or a clear statement of responsibilities for that role. 25.23

25.23 – See response to Comment 25.8.

The Missouri Department of Natural Resources has recently provided comments to the Department of Energy WSSRAP office on the draft Stewardship plan. Significant areas of concern expressed in those documents are: 25.24

25.24 – See response to Comment 25.8.

- The Stewardship Plan proposes to view the "Stewardship" issue from the perspective of 30 or 200 years depending on which regulation is referenced. Materials at the site will remain radioactive for many thousands of years. A responsible approach would seem to require

Department of Energy to take a longer view of Stewardship than that indicated in the document.

- The draft plan seems to view Stewardship as being implemented by someone with significant knowledge of historic and current site configuration, design details, remedial activities, and residual contaminants, i.e., one who has been involved with the site for many years. It is more reasonable to present this issue from the perspective of, and with the detail required by, the probable future user who will have responsibility for implementing long-term care of the site after remediation is completed. This user will not have the extensive background knowledge and detailed understanding or information that seems to be assumed in the current plan.

- A Stewardship Plan must be adaptable to operate effectively through the future. To effect this, significant review of the Plan and site conditions are tied to the CERCLA five-year review process. The Missouri Department of Natural Resources does not believe this is the most effective method to maintain currency of the plan or security of the site. In practice, the CERCLA review process has not been consistently enforced by Environmental Protection Agency (EPA) and is, therefore, not reliable for this purpose. A specific, detailed, and rigorous review process should be identified in the Plan that may be conducted concurrent with the CERCLA process, but is not dependent on it. The Missouri Department of Natural Resources recommends a comprehensive review after two years of post-closure operation and again three years later (after five years of post-closure operation). A five-year interval may be appropriate thereafter. The plan should indicate the review shall be conducted whether or not a CERCLA review is completed.

- The acknowledged limitations in current scientific understanding and technological capabilities also argue for a periodic review of the site status. As current technologies are assessed over long timeframes, new technologies are developed and additional understanding of site geology and hydrology is achieved, periodic reviews of the relative benefits of maintaining current status or renewed clean-up are recommended. Such reviews should be conducted by the Department of Energy or responsible federal party and the State and include public comment. Topics covered during such reviews should include monitoring, changes in status of the treatment and/or containment, and records.

  Periodic reviews also provide the opportunity to review new information of potential threats. As our understanding of the health consequences of exposure to chemicals has grown, so has the list of regulated chemicals. In contrast, a failure to provide for thorough periodic review limit the application of new knowledge to sites acknowledged as posing hazards for decades and centuries into the future.

- Often the terms "should" or "may" are used for activities, which are important to ensure site safety. Appropriate wording changes to incorporate terms such as "shall," "will," or "must" is recommended. Specific enforcement mechanisms, including meaningful penalties, needs to be identified should Department of Energy fail to meet its commitments under this Plan.

- What assurances and enforcement mechanisms are there which will require Department of Energy to continue to identify and ask for sufficient funding for the Weldon Spring Site? What funding does the Department of Energy intend to provide for state and local oversight agencies such as the Missouri Department of Natural Resources and the Weldon Spring Citizens Commission?

A funding mechanism for long-term monitoring and maintenance of engineered controls, such as periodic replacement of active and passive control mechanisms, and for contingency systems should be included in any Stewardship plan. 25.25

Department of Energy currently estimates long-term stewardship cost by using an activity-based cost approach. This estimate does not include costs for significant unforeseen problems, such as disposal cell damage or leakage. A more appropriate approach for funding Stewardship activities into the future would be to develop a "fund" (trust fund, escrow account, etc.) for that purpose. This "fund" would grow with time and finance solutions to problems, as they arise as well as day-to-day costs of planned monitoring and maintenance. The annual federal budget appropriations process, based on activity-based costs, will not accomplish this, since unforeseen problems can not be anticipated. The state of Tennessee perpetual care investment fund is an example of how provisions can be made for planned monitoring and maintenance by a state agency. This concept should be expanded to include funding for contingencies and to provide site-specific funds irrespective of which government agency (local, state, or federal) has been entrusted with Stewardship responsibilities. 25.26

25.25 – See response to Comment 25.1.

25.26 – The Department acknowledges this comment in a text box in Section 8.2 of the Study. The Draft Study may not have adequately distinguished between operational and contingency funding. Chapter 8 of the Study has been modified to discuss this distinction. Some of the cost estimates in the Report to Congress on Long-term Stewardship include contingency funding; others do not.

To: Steven Livingstone
U. S. Department of Energy

From: M. J. Plodinec, Director
Diagnostic Instrumentation and Analysis Laboratory
Mississippi State University
205 Research Boulevard
Starkville MS 39759

SUBJECT: COMMENTS ON LONG-TERM STEWARDSHIP STUDY

Dear Mr. Livingstone:

I appreciate the opportunity to comment on the *Draft Study*. When adopted, this should provide an excellent start for DOE's Stewardship program. In the following, I have provided comments primarily directed toward implementation and sustainability of the Stewardship program. They are intended to supplement the approach described in the *Draft Study*.

1. Role of Headquarters. The *Draft Study* does not clearly identify an active role for DOE Headquarters. If DOE Headquarters does not play an active role:

- The current crazy quilt of decisions in DOE's waste management program will be repeated in the Stewardship program. Once again, sites will make important decisions in an inconsistent manner, often with little regard for what makes sense technically. This has proven to be inefficient and costly in the waste management program - is there any real likelihood this pattern would not be repeated in the Stewardship program?

- DOE Headquarters - the primary point of contact with Congress - will have difficulty defending the Stewardship program's budget.

- The public's involvement in the program will be haphazard, which will ultimately put both schedules and budgets at risk. The cleanup of the site'ed waste at Fernald is a good case in point. Decisions were made by DOE and its contractors independent of the public and other stakeholders. The public's ire led to delays and a program which ultimately will cost many times what it should in terms of the hazards being mitigated.

The problem, of course, is that the field worries that DOE Headquarters will not understand the local regulatory climate, and, as a result, will make decisions or take actions that are locally untenable. A role for Headquarters which would avoid the field's concern is for Headquarters to mandate a structured process (such as that in Exhibit 9-1 in the *Draft Study*) for Stewardship decision-making and implementation, and then monitor compliance. While decisions would still be made at the local level, they would be made in a consistent fashion, and thus would be more easily defended. They would reflect input from the public and other stakeholders, and thus be more likely to achieve continued funding.

26.1

2. Funding. The *Draft Study* quite rightly expresses concern over the sustainability of funding for Stewardship. If we remain on the present path, it is all too likely that funding for Stewardship will become similar to funding for emergency management: an inadequate baseline punctuated by high-dollar spikes reflecting extreme weather events (e.g., the $25B for cleanup after Hurricane Andrew). However, there are some actions which DOE can take to avoid this fate:

- Formally involve the public in the planning and implementation process. This will help build a constituency for Stewardship.

26.2

26.1 – The Department acknowledges this comment in a text box in Section 4.2 of the Study. The Department's Long-term Stewardship Working Group recently identified the need for a corporate vision for long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. The corporate vision includes the appropriate organizational structure for long-term stewardship within the Department. The Department also recognizes that it is important to define long-term stewardship roles and responsibilities both within DOE and between DOE and other entities, including other federal agencies, states, Tribes, and regional governments. The Executive Steering Committee is developing a Strategic Plan for long-term stewardship; part of that effort will include identifying roles and responsibilities within DOE. The Department also notes that long-term stewardship as an issue is broader than DOE sites. For example, states and local governments already have long-term stewardship responsibilities at municipal landfills, and states will have long-term stewardship responsibility for "Superfund-lead" sites on the CERCLA NPL. Implementation of long-term stewardship across this broad spectrum of sites will require states to develop their own, independent capability to provide long-term stewardship.

26.2 – The Department acknowledges this comment in a text box in Section 8.2 of the Study. As noted in Section 8.2 of the Study, developing an alternative funding mechanism will require additional study and eventually Congressional action. Section 8.2 of the Study also provides a summary of the recent study of Trust Funds by Resources for the Future. The Department's Long-term Stewardship Working Group recently identified funding of long-term stewardship as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. Specific funding issues identified by the Working Group included: (1) difficulties in determining long-term stewardship costs now and in the future because there is no consistent procedure for how long-term stewardship activities are budgeted for and reported among DOE sites; (2) whether the annual appropriations process is the most effective mechanism for funding long-term stewardship activities that may be needed for decades or centuries; and (3) circumstances under which DOE should consider funding external parties (e.g., local governments) to conduct long-term stewardship activities or oversight. This comment will be forwarded to the Executive Steering Committee for their consideration. The Working Group also identified public involvement as an important issue for the Executive Steering Committee.

• Closely and consistently monitor the costs of Stewardship, and use these cost data as a means to drive R/D and the adoption of better technologies. The ECES system described in the *Draft Study* can be the tool DOE uses to do this. Congress will be pleasantly surprised to see a program of this magnitude being driven by measurable performance indicators. This is very consistent with the "rolling Stewardship" concept.

• Use life-cycle accounting. In many cases, life-cycle accounting will indicate the use of more capital-intensive solutions because of their lower operating costs.

3. Five Key Principles (§4.2). These are excellent! The NRC is to be commended for these. My only quibble is that these should include getting information to stakeholders in a consistent and effective manner, and involving the affected public in the long-term institutional management of each Stewardship site. 26.3

4. DOE's Science and Technology Investments (§4.2). This section is disappointing. It does not seem to recognize that much of the necessary S&T has been developed or is being developed by other agencies (DOD, NASA, EPA, even DOT), not DOE. The *Draft Study* also projects the national labs into the equation when it is not clear that they have the expertise to cost-effectively resolve some of the more important needs. For example, the national labs do not have as much to offer for structural monitoring as some university research organizations. Why should DOE fund the national labs to catch up? There needs to be much greater attention given to inter-agency cooperation. In particular, DOD and DOE share common problems, why not use the same technologies? 26.4

I am also concerned about the apparent reliance of the Stewardship program on the Focus Areas. The current arrangement is too much like DOE's typical "give me a rock" approach which seldom works. The Stewardship program needs to develop a coherent research program, and then work with the Focus Areas to ensure that it is carried out. 26.5

This is a good place to emphasize the importance of structural monitoring. DOE will stabilize activity in place in many facilities, and then rely on the integrity of the structures to prevent releases of activity. Tools are needed to detect changes in structures, thus warning of the potential for release of activity.

5. "Rolling stewardship" (§10.2). This is an excellent concept, which will allow DOE to take advantage of lessons learned. However, to be truly effective, this concept must include monitoring of financial performance as well. Such monitoring will spotlight opportunities / needs for better technologies, incorrect programmatic assumptions, and problems at specific sites in a unique way not likely to be matched by any other method. It is imperative that DOE monitor actual costs and use these data as an important part of program planning. In particular, the personnel costs associated with monitoring must be closely followed. For waste management, personnel costs typically represent 70+% of the total cost. We need to do better for the Stewardship program. 26.6

6. Long-term monitoring program. A comprehensive and consistent approach to long-term monitoring is needed across the DOE complex. The following goes a long way toward providing DOE with a cost effective and publicly-acceptable long-term monitoring program for DOE sites. This suggested approach for long term monitoring will help focus DOE management, the technical community and other stakeholders on the risks associated with each site, and will lead to cost effective solutions which are acceptable to all. Elements of this approach are: 26.7

• Develop a risk-based process for identifying long-term monitoring needs. This process will include public involvement as a cornerstone. Use of risk as the determinant of what is needed will

26.3 – The Department acknowledges this comment in a text box in Section 3.2 of the Study. Existing laws and regulations, especially the CERCLA process that is used for many site cleanups, require public involvement in the activities and decisions that lead to the selection of a remedy (ROD), including the technical and economic feasibility of cleanup to unrestricted use. However, these laws and regulations do not clearly articulate the role of public involvement in the activities and decisions that follow the ROD. At the same time, the Department recognizes that the ultimate success of long-term stewardship depends on the active involvement of the affected parties, including local governments and Tribes. It is important for all parties to develop a workable approach for meaningful public involvement in the decisions that affect and manage long-term stewardship activities. The Study identifies this as an additional key challenge associated with long-term stewardship. The Department's Long-term Stewardship Working Group recently identified public involvement as one of the most important issues that should be addressed by the senior management Long-term Stewardship Executive Steering Committee. This issue includes how DOE should balance the need to involve the public in maintaining controls (e.g., institutional controls such as water use restrictions) with competing needs such as classified information or activities, particularly at sites with ongoing national security missions. The Department's Long-term Stewardship Working Group also has identified the issue of under what circumstances DOE should consider funding of external parties as one of the most important issues that should be addressed by the Executive Steering Committee. Although the general issue of public involvement has been identified to the Executive Steering Committee, specifics of implementation (e.g., what external organizations should be involved, what should be provided by DOE, what mechanisms for public involvement should be used) have not been discussed and may be determined on a site-specific basis. We intend for the public participation process to allow for meaningful Tribal and public involvement. The Department notes, however, that the five principles are quoted from a report prepared by the National Academy of Sciences, a copy of which is available on the long-term stewardship web page (http://lts.apps.em.doe.gov).

26.4 – The Department agrees that the EM program, or DOE itself, will not be the only source of new science and technology for LTS. The language in Section 4.2.4 of the Study has been modified to reflect this. The Department acknowledges this comment in a text box in Section 4.2.4 of the Study.

26.5 – See response to Comment 26.4.

26.6 – Thank you for your comment. The Department will do its best to monitor actual costs and use them in data program planning.

26.7 – The Department acknowledges this comment in Section 5.3 of the Study. The Department believes that Section 5.3 of the Study appropriately discusses the difficulties and challenges associated with ensuring the long-term maintenance of institutional controls, including roles and responsibilities for enforcement. The determination of the type of institutional controls and enforcement of these controls (e.g., by DOE or external parties) will be determined on a site-specific basis as part of remedy selection and long-term stewardship planning and may change over time.

ensure that a consistent approach is taken across the entire DOE complex. The success experienced in the UK in gaining public acceptance of waste management decisions will also be utilized to reduce the danger of public perception hindering progress toward solutions.

• Select monitoring systems for each site which can detect any change in the condition of contaminated waste materials - whether the contamination is radioactive or chemical - in a timely fashion. The Stewardship program will do the same for monitoring the integrity of closed buildings. The Stewardship program is the only entity with the responsibility and the capability to optimize system costs, so it must take the lead in helping individual sites. However, because much of the requisite technology is outside the DOE community, involvement of such groups as the Army Corps of Engineers, NASA, and the USGS is a necessity.

• Establish an RD&D program to develop monitoring systems to fill any gaps identified through site-specific technology selection.

• Develop a monitor performance tracking program which will follow reliability, availability, maintainability, and performance of monitoring systems. This will be used to facilitate future cost and performance improvements through focused R/D.

• DOE's Stewardship program will establish an ongoing web-based system - similar to that in use in the UK (see www.aest.co.uk/netcen/signal/data/index.html) - which will allow any member of the public to have access to all of the monitoring data at a given site. Through this public involvement, public confidence will be greatly enhanced. Both site managers and the public should see that, if followed, this approach will lead to effective and cost-controlled monitoring of closed sites and facilities. Through use of the approach, initial costs will be minimized, and there will be a path toward reducing the long-term mortgage without diminishing the performance of the monitoring system. The use of risk will ensure a consistent approach across the Department, and thereby avoid some of the problems which have occurred in managing the same types of wastes at different sites. Most importantly this approach will allow DOE to reassure the public that DOE is doing the right thing, assure Congress that present costs are being held down and that DOE is on a path which will lead to enhanced performance (better information at lower cost) in the future.

I appreciate the opportunity to comment on the *Draft Study*.