May 25, 2004

Ms. Robin M. Nazzaro, Director
Natural Resources and Environment
United States General Accounting Office
441 G Street, NW
Washington, D.C. 20548

Dear Ms. Nazzaro:

Thank you for the opportunity to review and submit comments on the May 2004 draft of the General Accounting Office's (GAO) report entitled "Low-Level Radioactive Waste: Disposal Availability Adequate in Short Term, but Oversight Needed to Identify Any Future Shortfalls" (GAO-04-604). The U.S. Nuclear Regulatory Commission (NRC) appreciates the time and effort that you and your staff have taken to review this topic.

The GAO report provides an accurate summary of current low-level radioactive waste (LLRW) disposal activities and potential issues that may be encountered in the future. It also recommends that Congress consider directing NRC to gather information necessary to monitor the adequacy of LLRW disposal and the safety and security of stored waste, and to report to Congress if LLRW management conditions should change enough to warrant consideration of new legislation to ensure safe, reliable, cost-effective disposal availability. We fully support the goal of having a safe, reliable, and cost-effective system for the disposal of LLRW in the U.S. It is also our view that other actions in place of those GAO is recommending would be more effective in moving towards this goal, as we discuss below and in our more detailed enclosed comments.

The current report is a sequel to GAO's 1999 report, "Low-Level Radioactive Wastes: States Are Not Developing Disposal Facilities" (GAO/RCED-99-238). That report concluded that none of the States' or compacts' efforts to develop new disposal capacity had been successful and the State efforts to do so had "essentially stopped." This earlier report also examined alternatives to the current system for development of new disposal capacity in the U.S., but did not recommend any of them. Appendix II of the current report updates those alternatives. We believe that it is now time for GAO to explore these alternatives further because the future availability of disposal capacity and the costs of disposal under the current system remain highly uncertain and LLRW generators need predictability and stability in the national disposal system. We acknowledge that the potential approval for Envirocare to accept Class B and Class C wastes and licensing of a LLRW waste disposal facility in Texas could significantly improve the current LLRW disposal system in the U.S. At the same time, the nearly 20 years of experience under the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA) has demonstrated the difficulties in siting and licensing a LLRW facility. Not one new facility has been developed in this time under the LLRWPAA. Therefore, we believe it is in the national interest to begin exploring the alternatives identified in Appendix II that would potentially provide a better legal and policy framework for new disposal options for commercial generators of LLRW.

We also believe that the specific recommendations in your current report for NRC to monitor LLRW disposal adequacy, safety, and security of stored wastes, and to report to Congress when new legislation needs to be considered, will not be effective or efficient. Most of the data to be collected are not related to, or needed for, carrying out our mission to protect public health and safety and promote the common defense and security. We believe that such monitoring and reporting, if necessary, would fall within the responsibility of the Department of Energy (DOE), as was previously recognized by Congress in LLRWPAA. Also, until 2000, much of this data was required to be collected by DOE per the LLRWPAA of 1985 because such data collection was inconsistent with NRC's health and safety mission.

The regulatory costs associated with complying with this recommendation are not balanced by the negligible benefits. Although we have not fully considered all of the types of data that would need to be collected, it would include such information as DOE's plans for disposal at commercial sites, cost information for disposal and processing, future waste generation rates for NRC and Agreement State licensees, the status of court decisions affecting LLRW disposal, and specific details of plans for disposal facilities in the U.S. (such as the proposed Texas facility). The recommendation would also have NRC and Agreement States collect information on the security and safety of stored waste. The 33 NRC Agreement States license most of the uses of radioactive materials in the U.S., and any safety and security data collection requirements would have to be implemented by them, as well as NRC. This could involve rulemaking within each of the Agreement States. An NRC rulemaking would require Office of Management and Budget clearances for requiring this information to be submitted, presumably annually. For NRC to request that Agreement States obtain this information and carry out similar monitoring would likely result in Agreement State requests for NRC funding. Without such funding, the Agreement States would likely view such a workload as an unfunded mandate.

NRC is already taking other actions, described in our detailed comments in the enclosure, to identify radioactive materials of concern, including LLRW, and to enhance their safety and security. It is our view that the actions we are currently implementing will adequately ensure safety and security of radioactive materials, including stored LLRW.

The report notes that NRC is in the process of conducting vulnerability studies, but fails to mention other actions NRC has taken to manage and minimize these risks. The comprehensive vulnerability assessments involve all licensees in the industrial and medical areas, including those with LLRW storage and disposal. The results of these assessments will include recommendations for graded approaches to security enhancements based on overall risk of particular facilities. The risks from LLRW storage will be appropriately factored into the NRC staff recommendations.

Further, we do not agree that LLRW is an attractive target for adversaries. Much of this material is dispersed radioactive material within other non-radioactive waste materials and, in this form, requires procurement of large volumes of material to obtain significant quantities of radioisotopes of greatest security concern. We do consider that spent sealed sources (discrete radioactive sources), which are collected by licensed waste brokers and either recycled or packaged and transported for disposal, present a potential vulnerability. The NRC, through the Materials Security Working Group, is addressing the security risks associated with this group of licensees and will be issuing enhanced security measures as part of its ongoing efforts to

address security for medium-priority radioactive materials licensees. The NRC has completed the enhanced security measures for high-priority licensees (e.g., reactor licensees) and anticipates completing enhanced security measures for the medium-priority radioactive materials licensees by December 2004. These measures consider all radioactive materials at licensees' facilities (both for NRC and Agreement State licensees). In addition, the NRC has undertaken other efforts to enhance security, such as establishing an interim database for sealed sources and ultimately establishing a National Source Tracking System.

Our detailed comments on the draft report are enclosed. If you have any questions on our comments or would like to discuss these issues further, please contact Melinda Malloy of my staff at 301-415-1785.

Sincerely,

/RA/

Luis A. Reyes
Executive Director
for Operations

Enclosure:
Comments on Draft GAO Report

cc: D. Feehan, GAO (Denver)

U.S. Nuclear Regulatory Commission
Comments on Draft GAO-04-604,
"Low-Level Radioactive Waste:
Disposal Availability Adequate in Short Term,
but Oversight Needed to Identify Any Future Shortfalls"

General:

The report recommends that Congress direct the U.S. Nuclear Regulatory Commission (NRC) to gather the information necessary to monitor the adequacy of Low-Level Radioactive Waste (LLRW) disposal availability and the safety and security of stored waste. The report also recommends that Congress direct NRC to report to Congress if LLRW management conditions should change enough to warrant consideration of new legislation to ensure safe, reliable, and cost-effective disposal availability. We disagree with these recommendations for the following reasons:

1. The General Accounting Office (GAO) is recommending that NRC collect data relevant to national policy regarding LLRW disposal, information that is not currently required from licensees by NRC regulations. Most of these data are not related to our mission and statutory responsibility to protect public health and safety and promote the common defense and security. LLRW policy, law (i.e., the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA)), and practice are influenced by costs; stakeholder views; U.S. Department of Energy (DOE) decisions on its future use of commercial facilities; court decisions regarding LLRW disposal facility siting; and value judgments about progress or lack of progress in future disposal facility development efforts, among other factors. Absent a clear health and safety or common defense and security need, NRC is not equipped, and is not in a position to collect, the kind of data that this recommendation suggests.

2. Much of this data was previously required to be collected by DOE in the LLRWPAA of 1985, because such data collection was inconsistent with NRC's health and safety mission. Specifically, Public Law 99-240, the LLRWPAA, Section 2021g, gave the following responsibilities to the DOE (emphasis added):

   "Reports – *The Secretary shall prepare and submit to the Congress on an annual basis a report which* (1) summarizes the progress of low-level waste disposal siting and licensing activities within each compact region, (2) reviews the available volume reduction technologies, their applications, effectiveness, and costs on a per unit volume basis, (3) ***reviews interim storage facility requirements, costs, and usage,*** (4) summarizes transportation requirements for such wastes on an inter- and intra-regional basis, (5) summarizes the data on the total amount of low-level waste shipped for disposal on a yearly basis, the proportion of such wastes subjected to volume reduction, the average volume reduction attained, ***and the proportion of wastes stored on an interim basis*****, and** (6) ***projects the interim storage and final disposal volume requirements anticipated for the following year, on a regional basis.***"

Enclosure

As GAO notes in its report, this provision was terminated, effective May 15, 2000, pursuant to section 3003 of Pub. L. 104-66, as amended. Nevertheless, this does not alter the fact that Congress chose, in the LLRWPAA, not to make NRC responsible for data collection that is not related to our mission.

3. With respect to ensuring safety and security, in our view, the specific data collection recommended by GAO is not needed. NRC and the Agreement States have regulatory programs, consisting of licensing and inspection activities, to ensure that facilities are designed, constructed, and operated safely and that security is maintained. It is not necessary that these specific data on LLRW storage be submitted to NRC in order to ensure safety and security. NRC believes that its regulations and the additional measures discussed in specific Comment 5 are sufficient to ensure adequate safety and security of all radioactive materials, including LLRW.

4. The regulatory costs associated with complying with this recommendation are not balanced by the negligible benefits. Although we have not fully considered all of the types of data that would need to be collected, it would include such information as DOE's plans for disposal at commercial sites, cost information for disposal and processing, future waste generation rates for NRC and Agreement State licensees, the status of court decisions affecting LLRW disposal, and specific details of plans for disposal facilities in the U.S. (such as the proposed Texas facility). The recommendation would also have NRC and Agreement States collect information on the security and safety of stored waste. The 33 NRC Agreement States license most of the uses of radioactive materials in the U.S., and any safety and security data collection requirements would have to be implemented by them, as well as NRC. This could involve rulemaking within each of the Agreement States. An NRC rulemaking would require Office of Management and Budget clearances for requiring this information to be submitted, presumably annually. For NRC to request that Agreement States obtain this information and carry out similar monitoring would likely result in Agreement State requests for NRC funding. Without such funding, the Agreement States would likely view such a workload as an unfunded mandate.

5. We also believe that although the current disposal system in the U.S. is safe, it is not generally considered to be reliable (i.e., generators do not have good assurance that disposal will be available to them over the next 5 to 10 years) or cost-effective. The most significant factor for licensees to choose storage of waste over disposal is because the current system is not cost-effective. Licensees will most likely continue to select storage over disposal until it becomes more cost-effective to dispose of waste rather than store it for prolonged periods of time. As the report notes, disposal costs can be over $400 per cubic foot, and even $1625 per cubic foot for certain wastes in the U.S. In France, the costs are approximately $125-200 per cubic foot and waste disposal is provided by a federal agency. Spain has a similar federal waste disposal framework. The costs of LLRW storage and disposal for U.S. generators ultimately affect whether all the beneficial uses of radioactive materials are available to consumers and how much they will cost. Consistent with our recommendation in the cover letter, we believe that it would be useful for GAO to periodically report to Congress on these policy issues, and the alternatives to the current system that the GAO previously considered as identified in Appendix II, so that Congress is informed and in a position to take appropriate legislative action.

Specific Comments:

1. On page 3, the report states that NRC "has divided the wastes covered by the Act into categories of increasing levels of radioactivity and security needs...." The categorization of LLRW into classes A, B, and C was not based on security needs. The report should be revised to state that the categorization is based on public safety considerations.

2. On page 4, the report states "Under the Atomic Energy Act, NRC can enter into agreements with states, known as Agreement States, to assume some of its regulatory responsibilities, such as licensing LLRW disposal facilities." The draft version could be interpreted to imply that it is easy for the NRC to take back these responsibilities from the States. In fact, once NRC has relinquished its authority, it is very difficult to take back these responsibilities absent the State wanting to give them back. We suggest that this sentence be reworded to be consistent with Section 274 of the Atomic Energy Act, as follows: "Under the Atomic Energy Act, NRC can enter into agreements with states, known as Agreement States, to discontinue its regulatory responsibilities with respect to byproduct, source, and certain quantities of special nuclear materials. These responsibilities relinquished to states include the licensing of LLRW disposal facilities."

3. On page 6, the report states "...NRC has diminished its involvement in LLRW management by the states." In other places (e.g., page 14), this thought is expanded on. The report should be clarified by adding additional reasons the NRC has decreased its efforts. It should also be noted that NRC's level of effort in the LLRW area has been level for the past 6 years. We suggest that this sentence end after "May 2000" and add the following: "In the late 1990s, NRC decreased its direct involvement in LLRW management because no new disposal sites were being developed either in non-Agreement States (where NRC would conduct the license application review) or Agreement States (where NRC would provide technical assistance to the States upon request)."

4. On pages 7-8, the report states "...if safety and security concerns should arise from any specific location of stored waste, NRC has the authority under the Act to override any compact restrictions and allow shipment of the waste to a regional or other nonfederal disposal facility." This is based on Section 6(a) of the LLRWPAA, which says that NRC may do this "if necessary to eliminate an immediate and serious threat to the public health and safety or the common defense and security." The sentence in the draft report does not capture the extreme circumstances that would be required for NRC to approve such actions. This same idea is correctly stated on page 24. Moreover, the referenced "perceived risk" is not attributed to anyone or to any population in particular. It is suggested that the sentence be reworded, as follows: "Since September 11, 2001, both the public's concern with, and its perception of risk associated with, a radioactive release, including that from stored LLRW, has increased. Should an immediate and serious threat exist from any specific location of stored waste, NRC has the authority under the Act to override any compact restrictions and allow shipment of the waste to a regional or other nonfederal disposal facility, under narrowly defined conditions pursuant to 10 CFR Part 62. Alternatives must be explored by the person making the request, such as storing at the site of generation or at a licensed storage facility; purchasing disposal capacity; or requesting disposal at a Federal LLRW disposal facility."

5. On page 8, the report states "Safety and security risks are expected to rise as increasing volumes of class B and C wastes will need storage for longer periods if most states have no disposal option for these wastes." On pages 24 and 26, the report notes that at least a few radioisotopes of greatest security concern are classified as LLRW and safety and security risks might increase as the volume and duration of stored LLRW increases. However, the report does not balance these speculative statements with the actions NRC has taken to manage and minimize these risks, nor put them into context by discussing LLRW as an unattractive target for adversaries. We have a variety of means for ensuring safety and security, including the issuance of guidance, license conditions, conducting inspections, etc. As further discussed in Comment 7, we do not believe that licensee reporting of data will enhance safety and security that can otherwise be ensured.

   The report notes that NRC is in the process of conducting vulnerability studies, but fails to mention other actions NRC has taken to manage and minimize these risks. The comprehensive vulnerability assessments involve all licensees in the industrial and medical areas, including those with LLRW storage and disposal. The results of these assessments will include recommendations for graded approaches to security enhancements based on overall risk of particular facilities. The risks from LLRW storage will be appropriately factored into the NRC staff recommendations.

   Further, we do not agree that LLRW is an attractive target for adversaries. Much of this material is dispersed radioactive material within other non-radioactive waste materials and, in this form, requires procurement of large volumes of material to obtain significant quantities of radioisotopes of greatest security concern. We do consider that spent sealed sources (discrete radioactive sources), which are collected by licensed waste brokers and either recycled or packaged and transported for disposal, present a potential vulnerability. The NRC, through the Materials Security Working Group, is addressing the security risks associated with this group of licensees and will be issuing enhanced security measures as part of its ongoing efforts to address security for medium-priority radioactive materials licensees. The NRC has completed the enhanced security measures for high-priority licensees (e.g., reactor licensees) and anticipates completing enhanced security measures for the medium-priority radioactive materials licensees by December 2004. These measures consider all radioactive materials at licensees' facilities (both for NRC and Agreement State licensees). In addition, the NRC has undertaken other efforts to enhance security, such as establishing an interim database for sealed sources and ultimately establishing a National Source Tracking System.

6. On page 15, the report notes that the NRC has surveyed States to determine if new regulations should be developed for assured isolation facilities. In a staff requirements memorandum for SECY-03-0223, "Rulemaking Plan: Assured Isolation Facilities," the Commission directed NRC staff to defer further rulemaking in this area and to review the need for further action annually. This annual review would include the need for potential rulemaking associated with assured isolation facilities and the potential need for rulemaking and/or regulatory guidance for long-term storage of LLRW. The Commission also directed NRC staff to participate, as resources allow, in the Conference of Radiation Control Program Directors' development of a suggested State regulation for control of radiation in assured isolation facilities. It is suggested that the report be revised to reflect these actions.

7. On page 23, the report states that “since the mid-1990’s, the Commission has allowed onsite storage of LLRW without a specified limit as long as it is safe and secure.” We recommend that this sentence add the word “time” between “specified” and “limit,” to distinguish it from radioactivity limits that NRC specifies in some of its licenses.