

Managing Waste in a Regulated Environment: A Success Story

Abstract:

On October 29, 2003, the Aberdeen Proving Grounds (APG) petitioned the Appalachian States Low-Level Waste Compact (Compact) for a variance regarding shipments of waste out-of-compact. This paper addresses situations that waste managers face when regulatory bodies continue to be required to operate under out-dated rules that limit, reduce or prevent the management and disposal of low-level radioactive waste (LLRW).

Overview

Nearly a quarter century ago, the United States Congress passed the Low-Level Waste Policy Act. The law enabled states to form compacts with the expressed purpose of creating, managing, and disposing of LLRW. Since the passage of the act and its amendment, the ability for some compacts to deal with management issues has been strained and bound, in some cases, by outdated rules.

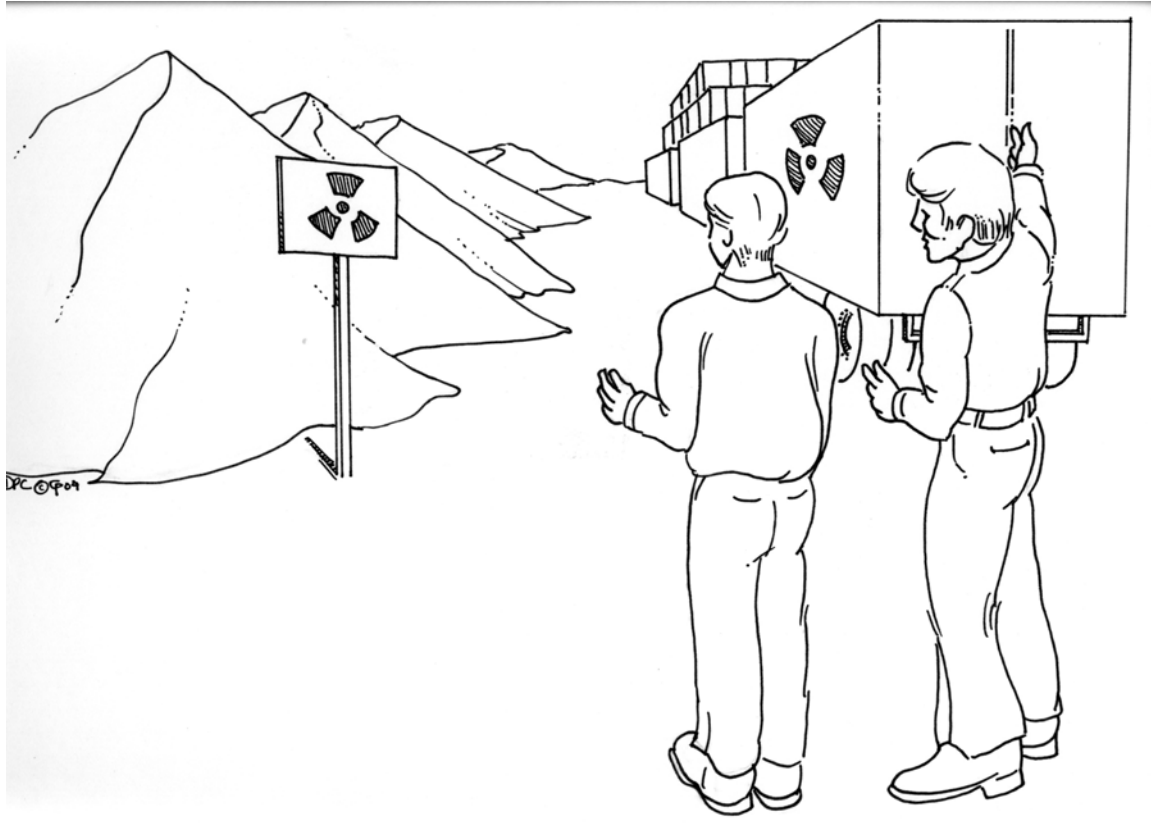
Managing waste in regulated environment

Rousseau once wrote, “Good laws lead to the making of better ones; bad ones bring about the worse” (Bartlett’s Familiar Quotations, Little Brown & Company, 1992, page 319). The LLW Policy and Amendments Acts and accompanying compact legislation are showing signs of age by requiring commissions and authorities to operate with flaws in being able to direct and rule-on today’s waste streams and disposal methodologies. It is my opinion that our legislators should review these laws, streamline and improve them to better guide, not hinder those who they regulate. This paper depicts how an out-dated rule potentially thwarted the safe, effective, and efficient management and disposal of low-level radioactive waste.

This paper also celebrates the role and tenacity of waste managers throughout this country. Two managers at APG saw a potential on-site waste management and compact-wide regulatory problem. They both believed that by petitioning the Compact for relief with logical and practical needs spelled out that the system would respond in a positive manner and grant a needed variance. Their request, though applauded by regulatory body members as a proactive proposal, was denied by the majority in a roll-call vote. This however was not the end of the story. The APG waste managers chose to seize-the-day, exercise their free speech, use logic and reason with open-minded and reasonable commissioners and get a reprieve to meet their need to safely, effectively, and efficiently manage and dispose of waste at APG.

And now, the rest of the story

At this time, I wish to thank my friend and former colleague David P.Cochrane at Penn State University. Dave has created the following pictographs to enhance this presentation--and now, the rest of the story.



This story took place in the fall of 2003. Two waste managers at APG found themselves in a situation that demanded action regarding current and impending waste generation. Recognizing their problem, the managers decided to contact their state regulatory agency—the Maryland Department of the Environment and communicated their current and near-future waste needs and proposal for resolution. Maryland officials upon meeting with APG agreed that a variance would be needed to eliminate a potential Catch 22 clause in the Compact’s rules.

The APG managers did not face their 11th hour challenge in the formative stage of the process, but during the compact commission meeting deliberation and post-action phase. It is here where the managers’ efforts to receive an exception/exemption were dashed by a vote that refused the request. The vote took place before lunch. After the vote, some of the Maryland representatives left the meeting thinking the matter was final. The challenge before the two managers was either leave or to seek out each negative voter and discuss the facts of the matter and that their need was on-going and timely. The managers decided that it was more important to speak to this issue and attempt to make change than to go away.

Though the two APG managers were formally recognized at the beginning of the commission meeting, they were not on the agenda to speak to the variance requested. The presentation and rationale for the variance was brought forth by the state of Maryland. Maryland’s spokesperson presented the facts and rationale and even concluded in his presentation that APG’s request for a variance was in the best interest of

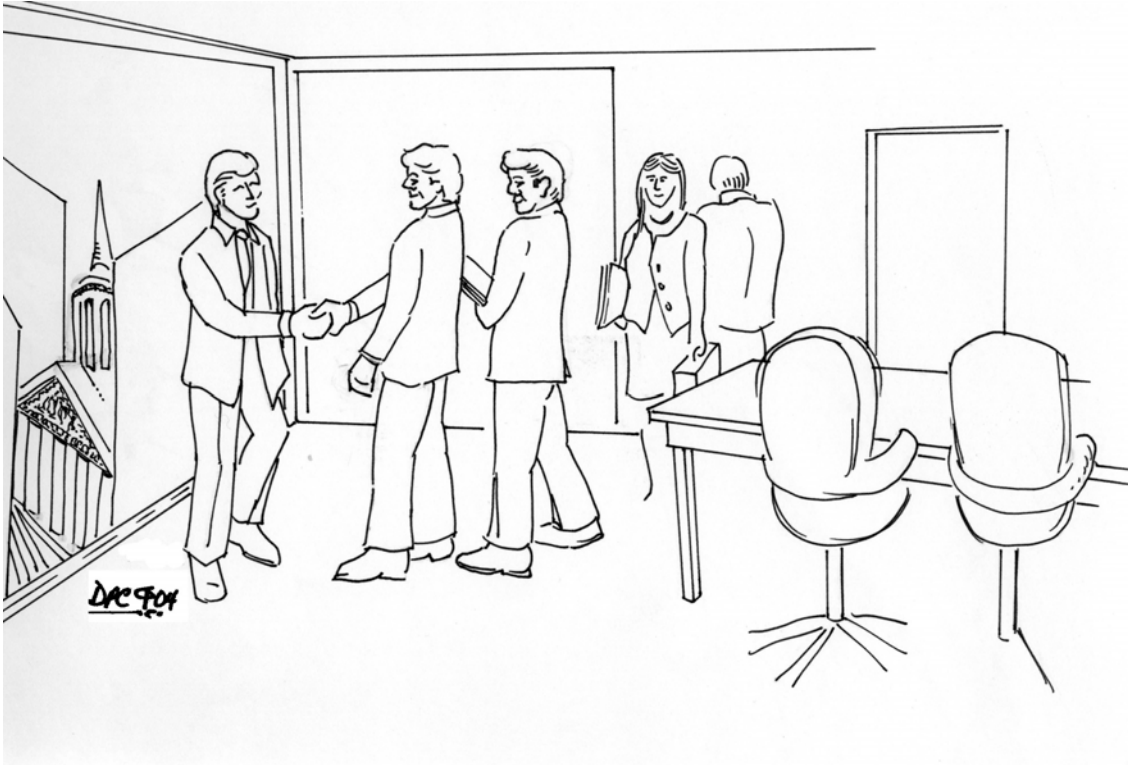
all parties--APG, Maryland, and the Appalachian States Low-Level Radioactive Waste Compact. Maryland reminded the commission members that APG had found itself in a similar situation five years ago and received a variance, but that the approved resolution by the commission only allowed for a 'one-time' exemption.

Waste management situation at Aberdeen Proving Grounds

APG is located in southern Harford County and southeastern Baltimore County, Maryland. It is bordered on the east and south by the Chesapeake Bay; to the west by Gunpowder Falls State Park, the BGE Power Plant, and residential areas; and to the north by the city of Aberdeen and towns of Magnolia, Edgewood, and Perryman. APG is comprised of approximately 79,000 government owned or leased acres of which approximately two-thirds are covered by open water and wetlands. The balance of the parcel consists of open land and woodlands. APG is divided into three main areas: Aberdeen Area, the Edgewood Area, and Churchville Test Area.

APG has had six areas on the site that have been through some type of remediation or clean-up over the last ten years. The sites or areas are Edgewood Area, Bomb Throwing Device Range (BTD), Spesutie Island, Westwood Landfill, Twenty-sixth Street, and the Dynamometer Test Course.

Two other areas at APG were being considered for remediation and/or clean-up. They are Ford's Farm and the Experimental Facility including Building 1103A on Spesutie Island. The Directorate of Safety, Health and the Environment (DSHE) provides the United States Army with site investigation and remedial action support. A qualitative and quantitative investigation of sites at APG takes place. This involves surface, subsurface soil, roadways, and other determined areas before DSHE determines its comprehensive work plan, and other site-specific safety and health plans for remediation and clean-up activities.



Discussions with Compact member and state regulator, Maryland

When APG approached Maryland’s Department of the Environment, it stated three points as its rationale for the APG request for a variance. They were:

- Remediation and clean-up programs do not occur on a regular basis.
- Remediation and clean-up wastes are large volumes of very low-level contaminated radioactive waste.
- Remediation and clean-up waste activities are not part of the normal operation at APG, therefore, the State of Maryland manifested yearly waste costs for remediation and clean-up should not be counted for these waste shipments.

In addition, APG told the state that the US EPA under CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) and US NRC issues orders for remediation or clean-up for APG. This process is dynamic and based on specific site considerations and on the availability of funding. Given the activities at APG and its many decades of operation, it was also important to note that remediation and clean-up may involve the management and waste generated by historical consolidation, repackaging, and shipment of waste that could go back to the 1930’s.



The Issue, The Need

Simply put, APG's waste management problem would not go away. The best solution was disposal. In February 2003, an Engineering Evaluation/Cost Analysis report entitled, "Radioactive Waste Management Facility Removal Action at Aberdeen Proving Grounds" became a prime source of background data. The report stated:

"APG has been faced by two alternatives, 'no action' and 'excavation and disposal.' The 'excavation and disposal' alternative is recommended as the preferred alternative, because it would be protective of human health and the environment, meet the risk-based remediation goals, meet long-term and short-term goals, and reduce the quantity of radioactive waste on site. It is technically and administratively feasible, and can be implemented with readily available equipment and materials."



Back-to-the-Future

In 1998, the Appalachian States Low-Level Radioactive Waste Compact Commission was petitioned by APG and the State of Maryland to exempt remediation activity waste shipped by APG the previous three years. This was done to allow approximately 87,000 cubic feet of remedial action waste to not be counted against Maryland's twenty-five percent threshold limit found in Compact law. Resolution 1998-3 was adopted by the Compact Commission on June 18, 1998. The resolution stated:

“APG...generated large volumes of very low-level radioactive waste in the past three years, which remediation activities are of limited duration and which will thus no longer, in the foreseeable future, result in Maryland exceeding the twenty-five percent threshold for designation as a ‘host state’.”

It has been over five years since that Resolution was adopted. APG must again petition the Compact Commission for an exception/exemption. But this time recognize that the Engineering Evaluation/Cost Analysis report on Radioactive Waste Management Facility Removal Action at Aberdeen Proving Ground (February 2003), it is imperative that APG excavate and dispose of sites that warrant remediation or clean-up at APG's vast site. The report went on to say regarding the need for disposal by stating, “There is no option

for good citizenship, protection of workers and environment, and meeting regulatory mandates established by the US NRC and the US EPA under CERCLA.”

To illustrate the volume, activity, and character of the waste found in remediation and clean-up activities at APG, records of the shipment of remediation waste were offered that showed that during 1997 from the Edgewood Area at APG. A total of six shipments were made amounting to 16,898 cubic feet of NORM (Natural Occurring Radioactive Materials) contaminated solids with trace or very low concentrations. These shipments were below regulatory limits containing the radioactive elements of Cesium, Cobalt, Natural Uranium, Radium, Strontium, and Thorium. It was also noted that there were no shipments of remediation or clean-up wastes in 1998.

APG completed a mandated waste remediation and clean-up in 2003, at the Army Research Laboratories--Transonic Range and Aberdeen Bomb Throwing Device sites. The amount of this waste was 27,000 cubic feet of NORM contaminated solids. APG also has an anticipated shipment of DU that is part of the normal operations. It amounts to 6,750 cubic feet. As the Ford's Farm and the Experimental Facility including Building 1103A on Spesutie Island remediation project begins, it is difficult to estimate how much waste will be generated. APG staff had indicated to Maryland regulators that it would be safe to assume that it will number in the tens of thousands of cubic feet.

Maryland is lead organization for petition for variance

On October 29, 2003, in Harrisburg, Pennsylvania, the State of Maryland was on the agenda to speak for the petition to grant a variance. Maryland's position on the petition before the Commission deals with accountability and the respect for protecting human health and the environment. Maryland said the petition meets risk-based remediation goals and reduces the quantity of radioactive waste on site. The State emphasized that the petition would not change the accounting system that is in place with regard to the goal and intent of the Compact law. It would provide relief to the State of Maryland with regard to the Compact legislation regarding twenty-five percent rule requiring host state designation once this is met over a three year average of waste shipped out-of-compact.



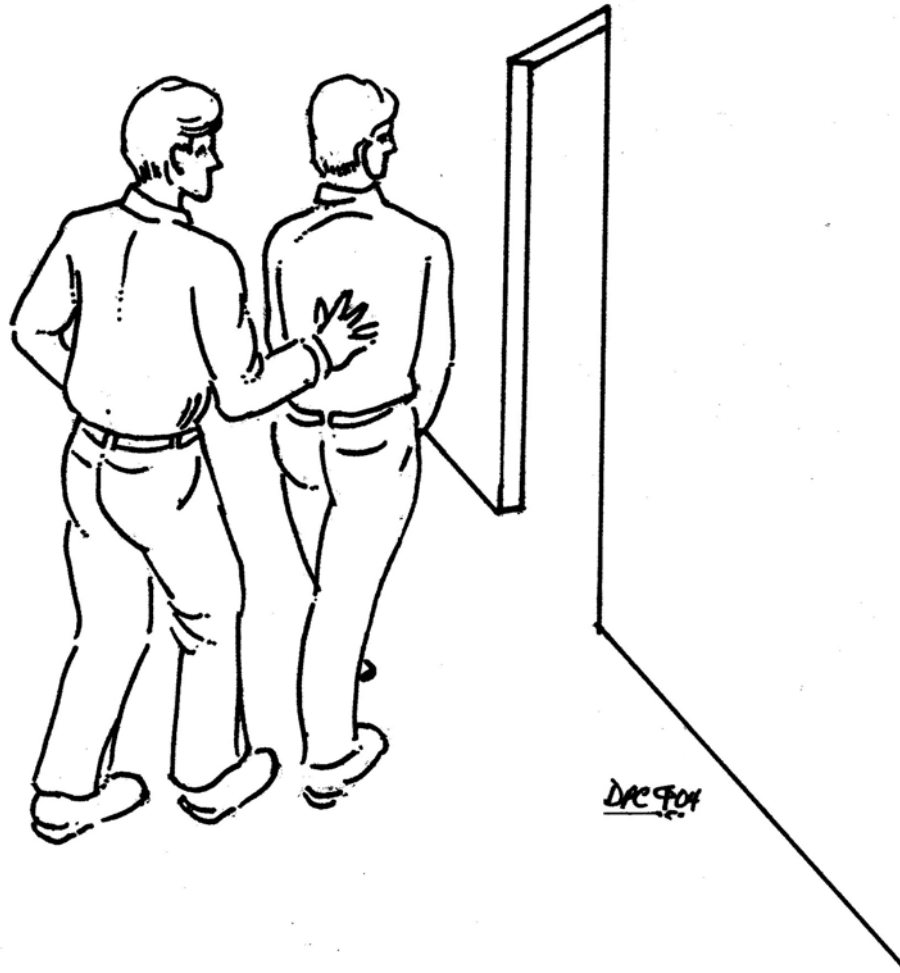
The Waiver is doable, but...

The Compact Commission's solicitor spelled out both sides of the issues of 'go' or 'no-go'--regarding the waiver. The solicitor told the commissioners that they could allow the exception/exemption, but that the request was really based on presumption, not fact. Pennsylvania, the Compact's host state told its fellow Commissioners that its position was to vote no on the variance. Maryland was the only member on the commission to vote in the affirmative for the variance. The motion failed.



To understand the rationale for the defeat of the petition, one has to read the Compact law that empowers the commissioners. Though they could have gone either way on the vote, as per the solicitor's comments, it was the 25% rule and its intent that prevailed.

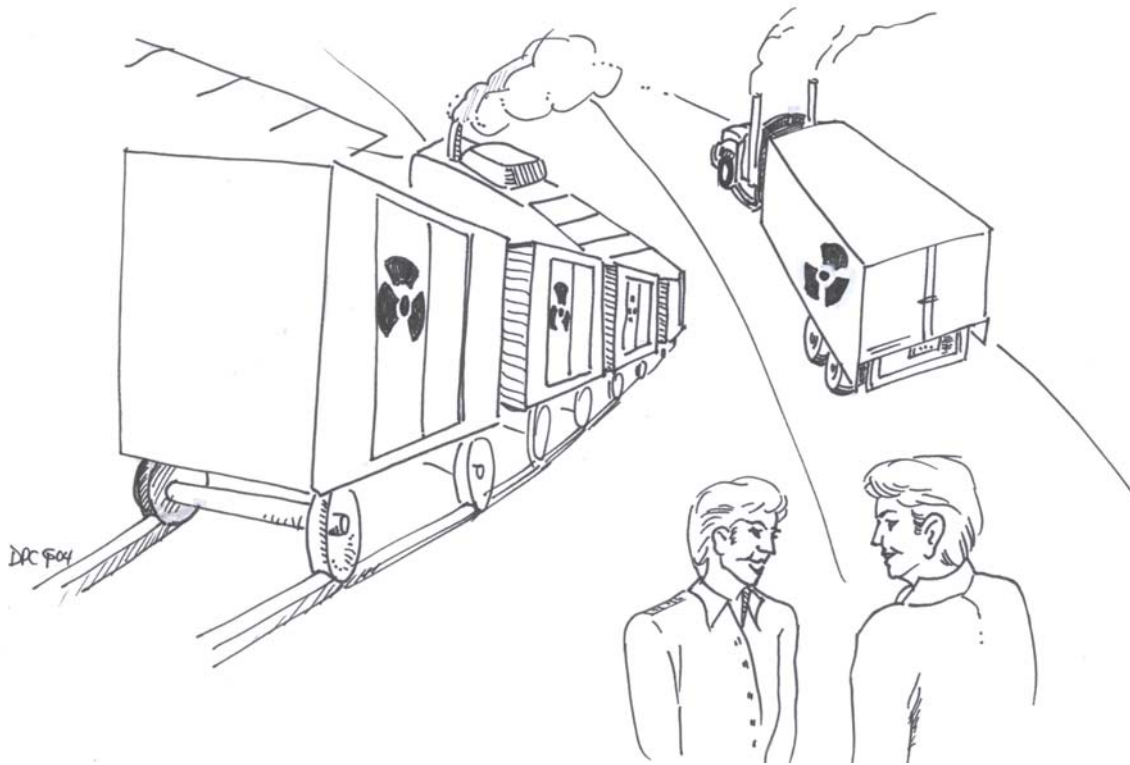
The commission reporting on this issue following the vote told those in the audience and the affected parties, come back and see us when you have shipped waste and it 'causes' a legal problem. Following the vote, the Compact Commission adjourned for lunch. Several representatives from Maryland left the meeting and the building.



APG managers--Carpe Diem!

The waste managers had two choices: 1) accept the decision, go back and report; accept the management consequences, or 2) take on the challenge and explain from their perspective the problem and that the consequences would not go away after this vote.

One definition of politics that I have always appreciated is that “politics is the art of making things possible.” This story illustrates that possibility, but that it can only happen in an open system, but one that is dynamic, open to discussion and reason—even after the fact.



Reason wins over adversity

Following the luncheon, the Compact Commissioners reconvened and took another hard look at the matter and came up with solution that was similar to the past, but at least addressed the APG managers' needs.

The following is a verbatim account of the actions of the Compact Commission's unapproved minutes:

"November 3, 2003

Summary of Actions Taken at the Annual Meeting of the Appalachian States Low-Level Radioactive Waste Commission

The Appalachian States Low-Level Radioactive Waste Commission held its annual meeting on October 29, 2003 in Harrisburg, PA. The following summary of significant actions is being provided to interested parties. The Commission:

Defeated a motion as follows:

RESOLVED, that the Commission will not designate Maryland as a host state of the Compact and Maryland will, therefore, not be responsible for developing and operating a regional LLRW disposal facility based upon the shipments of waste presented in the slide show, so long as they are completed within the time period beginning January 1, 2003 and ending December 31, 2005.

Adopted the following motions:

RESOLVED, that inasmuch as Pennsylvania has suspended the siting process, it is the sense of the Commission that no other state be expected to commence a siting process.

RESOLVED, that for the purposes of the provisions of the Compact relating to the designation of additional host states, that the applicable three-year period for testing the volumes and curie content of waste generated by any party shall be the period commencing January 1, 2003 and ending December 31, 2005, and each successful three year period thereafter.”

Summary

In summary, the case for change is strong. If it were not for a reasonable group of commissioners that chose to listen and reconsider their actions, tenacious and dedicated waste managers, who were willing to go beyond the call of duty, this story would not have been told. However, the fact stills remains that antiquated laws and rules should be reviewed, modified or revoked to meet present and future needs to enable safe, effective and efficient management and disposal of any waste form.

Conclusion and Honor

In conclusion, I wish to thank all of you this room and other waste managers throughout our country for your dedication and enthusiasm in providing for safe, effective and efficient management and disposal of waste.

I am sure that most of you in this meeting room know who the two waste managers from APG were that made this story a reality. It is my honor to formally recognize them. They are Matthew Wiharle and Ralph Cardenuto. Thank you Matt and Ralph for taking the 11th hour challenge.

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