

THE POLICY ACT AMENDMENTS OF 1985:  
THE OUTLOOK FOR TOLEDO EDISON COMPANY

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ABSTRACT

The Low-Level Radioactive Waste Policy Amendments Act of 1985 contains a number of provisions that will directly affect an electric utility that operates a commercial nuclear power reactor. The most important provisions are: extended access to the three existing low-level radioactive waste disposal facilities; clear milestone requirements for continued access to these regional disposal facilities; surcharges for disposal; penalties for failure to comply with the stated milestones; and licensing procedures and probable schedules for new disposal facilities. These provisions are evaluated one by one to assess the probable impact on an operating nuclear power reactor. Where appropriate, an assessment is made of needed provisions that were not included in the act.

INTRODUCTION

The Low-Level Radioactive Waste Policy Act of 1980 is short and to the point. Unfortunately, it did not result in nearly as much progress as Congress envisioned would be made during the last six years. Therefore, it was appropriate for Congress to again address the issue of the disposal of low-level radioactive waste (LLW). My discussion will focus on the key provisions of the Low-Level Radioactive Waste Policy Amendments Act of 1985 as they will affect the operator of a commercial nuclear power reactor. Because penalties included in the act could impact the utility operating a nuclear power reactor, the most probable impacts are assessed.

DISCUSSION

Without any doubt the most important provision of the 1985 amendments act is that access to the three existing LLW disposal sites is extended through the end of 1992. That provision alone has the potential of saving nuclear utilities millions of dollars in on-site storage facilities that might not now be required. However, the extended access is subject to volume allocations and progress milestones. As we will see later in this discussion, the sanctions for a non-sited compact region or state missing the milestones could result in future denial of access to the three operating disposal facilities.

What are the important provisions for the limited availability of the three operating regional disposal facilities during the next seven years? First of all, availability is subject to maximum volumes for the 7-year period and annual volumes for each disposal facility. Annual volumes are: Barnwell, South Carolina - 1,200,000 cubic feet; Richland, Washington - 1,400,000 cubic feet, Beatty, Nevada - 200,000 cubic feet. If all three States act to enforce these limitations, each State shall permit additional disposal in increments of 10%, but only up to the 7-year maximum volumes set. Commercial nuclear power reactors are subject to allocations based upon reactor type, location and time period.

The 4-year transition period is from January 1, 1986 through December 31, 1989. The 3-year licensing period is January 13, 1990 through December 31, 1992. These allocations are contained in Table I.

TABLE I

Annual Reactor LLW Volume Allocations  
(in Cubic feet)

Reactor Type	1986-89		1990-1992	
	In Sited Region	All Other Locations	In Sited Region	All Other Locations
PWR	12,324	10,452	11,208	8,220
BWR	27,600	23,412	25,092	18,396

Davis-Besse Nuclear Power Station is an 860 MWe, pressurized water reactor operated by Toledo Edison Company. The Station Chemistry and Health Physics Department has been very successful in reducing the annual volume of LLW shipped offsite for disposal. The reduction has been from over 17,000 cubic feet per year to about 5,000 cubic feet per year in 1985. Referring to Table I, the Davis-Besse volume allocations are 10,452 cubic feet for 1986 through 1989, and 8,220 cubic feet for 1990 through 1992. Thus, the act appears to have no adverse impact on annual LLW disposal offsite.

LLW from non-sited compact regions may be charged surcharges up to the following limits:

- In 1986 and 1987, \$10 per cubic foot
- In 1988 and 1989, \$20 per cubic foot
- In 1990, 1991, and 1992, \$40 per cubic foot

Let us now turn to the progress milestone requirements, which are of greater concern to a nuclear utility. By July 1, 1986, each non-member State shall ratify compact legislation, or by the enactment of legislation or certification of the Governor indicate its intent to develop an LLW disposal facility. The sanctions for missing this milestone are 6 months of doubled surcharges. Then,

LLW disposal access may be denied. This is not a problem for Toledo Edison, because Ohio is already a member of the Midwest Interstate Low-Level Radioactive Waste Commission.

The next milestone is January 1, 1988. By this date the non-sited compact region shall identify the State in which its LLW disposal facility is to be located and shall develop a siting plan (including detailed procedures and a schedule for establishing the location and preparing a license application, plus authority to implement the plan). The permitted sanctions for missing this milestone are 6 months of doubled surcharges, a second 6 months of quadrupled surcharges, then denial of access. It is my opinion, which is shared by others knowledgeable in this field, that this Federal milestone is the one most likely to be missed by a non-sited regional compact or State. It appears that a major factor in the lack of siting progress by regional compacts has been a reluctance by States to host an LLW disposal facility. In the case of Davis-Besse these surcharges could exceed \$600,000. This is not a devastating sum to a nuclear utility. However, an \$80/ft<sup>3</sup> surcharge could mean the difference between profit and loss for a small industrial generator of LLW. For all generators the more serious sanction would be denial of access to the disposal facility. One reason is that in general the cost of on-site storage is expensive. At Davis-Besse we estimate that an LLW storage facility would cost about \$115 per stored cubic foot of LLW. A key point to remember is that LLW generators have little control over whether a regional compact selects a host state and develops the detailed siting plan by January 1, 1988.

The next key milestone is January 1, 1990. By that date a complete application shall be filed with the Nuclear Regulatory Commission (or agreement state) to operate an LLW disposal facility. For a State proceeding on its own the alternative is for the Governor to certify to the NRC that his state will provide for the storage, disposal, or management of any LLW requiring disposal after December 31, 1992. It is probably too early to assess the probabilities of a compact or State missing the 1990 milestones. However, the permitted sanction is denial of access to the existing disposal facilities. Hopefully, the seriousness of the sanction will result in meeting this license application milestone.

Similarly, by January 1, 1992, a complete application must be filed for a license to operate an LLW disposal facility. I do not follow the exact logic for essentially repeating the milestone requirement for January, 1990. The penalty in this case is triple surcharges or \$120 per cubic foot. I really doubt if this heavy surcharge would be as effective a penalty as denial of access to disposal would be.

The last deadline is January 1, 1993. By that date a state or compact region must provide for disposal of all LLW generated within that state or region. The required action is that each state is

obligated to take title to and possession of the waste and be liable for damages to the generator if the state fails to take possession when the waste is available. The alternative is for the state to refund 25% of any surcharges the state received from the generator during 1990, 1991, and 1992. This refund alternative does not appear to be a very effective incentive to meet the deadline.

There are four other provisions that are pertinent to this discussion. First of all, it appears that many, if not all, of the new LLW disposal facilities will be based upon technologies other than traditional shallow land burial. Section 8 of the amendments act requires the NRC to identify methods for the disposal of LLW other than shallow land burial. The NRC is also to establish and publish technical guidance regarding the licensing of facilities utilizing such methods. The deadline for this guidance is 12 months after the date of enactment of the act. Similarly, within 24 months the NRC shall identify and publish all relevant technical information on alternative methods a state or compact must provide, and technical requirements that such facilities must meet. These requirements will assist the State or compact in meeting the milestones. Therefore, these provisions are positive from a nuclear utility standpoint.

Licensing review and approval provisions are also included. Within 12 months the NRC (or agreement State) must establish procedures and develop the technical capability for processing license applications. To the extent practicable, the NRC shall complete the review and processing of a license application within 15 months after receipt. Again, the requirements are favorable from the nuclear utility standpoint.

The act addressed radioactive waste below regulatory concern. Within 6 months the NRC is to establish standards and procedures, and develop the technical capability, for acting upon petitions to exempt specific radioactive waste streams from regulation. Exemption would be based on radionuclide concentrations being below regulatory concern. Here is an example of where I believe that the act did not go far enough. The act should have required the NRC to set standards to establish what qualified as being below regulatory concern.

Finally, the Secretary of Energy may make additional disposal capacity available for reactors because of unusual or unexpected operating, maintenance, repair or safety activities. The limits are 800,000 cubic feet for unusual volumes, and a total 7-year reactor allocation of 11,900,000 cubic feet. These provisions appear adequate and favorable from a nuclear utility standpoint.

Overall, the amendments act presents a favorable outlook for a nuclear utility. The most important provision is providing the seven-year interim access to the three existing LLW disposal facilities. Milestones are clearly stated, and there is a rebate

system to serve as incentives to the non-sited compact region or State. For example, 25% of the normal surcharges paid in are rebated if the State or compact region meets a milestone. This funding source should encourage the States and compact regions to meet the deadlines.

The overall outlook for a nuclear utility like Toledo Edison is guarded. For the Midwest Interstate LLW Commission the January 1, 1988 milestone for selecting a disposal facility host state and developing a siting plan and detailed procedures is a serious challenge. Failure could result in denial of access starting in January, 1989. As a result, I think most nuclear utilities will construct temporary on-site LLW storage facilities with capacities of at least 2 years. I am also concerned that the sanction for missing the January, 1992 milestone of filing a complete application to operate an LLW disposal facility may not be effective. The penalty of charging triple surcharges

falls on the LLW generators, but I do not think it is nearly as effective as the denial of access. Overall, the LLW generators have little control over the efficiency of the operation of the State agency or compact commission responsible for providing new LLW disposal facilities. This would indicate the need for contingency planning, and probably the need for some on-site storage capacity.

#### CONCLUSION

In summary, the Low-Level Radioactive Waste Policy Amendments Act of 1985 is definitely a large step forward. Governor Riley of South Carolina, Representative Udall, and the nuclear industry deserve the credit for evolving a reasonable law. The policy is now in place, the milestones are set, and in general responsibilities are adequately defined. It is now up to the non-sited compacts and states to perform. I believe the outlook for a nuclear utility is one of guarded optimism.