

**OPTIONS ANALYSIS**  
OPTIONS TO DEFER SPECIFIC LICENSING OF DRINKING WATER TREATMENT  
FACILITIES

ISSUE

In December 2000, the U.S. Environmental Protection Agency (EPA) finalized new drinking water regulations (65 FR 76708) in which they announced new maximum contaminant levels (MCLs) for radionuclides, including an MCL of 30 micrograms per liter (Fg/L) for uranium. Depending upon the technology chosen to treat the drinking water, concentrations of uranium could exceed 0.05 percent by weight of source material and thereby require licensing under 10 CFR Part 40, "Domestic Licensing of Source Material." Although a small number of the facilities requiring licensing could operate under the general license in 10 CFR 40.22, "Small quantities of source material," it is expected that, under existing regulations, most impacted facilities would be required to obtain a specific license. As EPA estimates the average affected treatment plant to serve a population of about 1,200 people, and very few affected communities serve more than 10,000 people, even modest regulatory costs could have a significant impact on this class of licensees. In addition, because EPA estimates up to 500 facilities (other estimates indicate more) could be impacted, there could be significant impacts to NRC resources for processing these unexpected license requests.

In a separate analysis, staff evaluated numerous options that could potentially relieve or diminish the regulatory burden associated with this issue. However, several of these alternatives to specific licensing, including the staff's preferred option, cannot be implemented before many drinking water treatment facilities could require licensing. As a result, the staff is also reviewing options for interim measures to defer the need for specifically licensing those facilities if an alternative to specific licensing is pursued by NRC.

EXISTING REGULATORY FRAMEWORK

Section 40.13(a), "unimportant quantities of source material," exempts persons from licensing requirements for the possession and use of source material in concentrations less than 0.05 percent by weight of source material.

Section 40.22, "small quantities of source material," provides a general license authorizing commercial and industrial firms, research, educational and medical institutions, and Federal, State, and local government agencies to use and transfer not more than fifteen (15) pounds of source material at any one time for research, development, educational, commercial or operational purposes. A person authorized to use or transfer source material under this general license, may not receive more than a total of 150 pounds of source material in any one calendar year. Persons using this general license are exempt from Parts 19, 20, and 21, unless such persons are also in possession of source material under a specific license. It should be noted that the transfer and disposal of source material held under this general license are still constrained by other NRC regulatory requirements.

## OPTIONS FOR DEFERRING THE SPECIFIC LICENSING OF DRINKING WATER TREATMENT FACILITIES

### **OPTION 1: Enforce Existing Regulatory Requirements**

Under this option, the staff would require any persons treating drinking water to apply for and obtain a specific license if they exceeded the threshold for a specific license, even while the staff pursues other actions to eventually relieve such a burden. This option would not relieve any burden for early adopters or NRC and the Agreement States and could result in the expenditure of additional resources to amend or terminate specific licenses if NRC modified how these facilities were regulated. Drinking water treatment facilities are required to meet EPA standards by the end of 2007. Without an alternative to specific licensing, significant resources would be required to develop and review the initial applications, as well as potentially develop guidance for licensing reviews, inspections, and enforcement. Furthermore, the diversion of resources for reviewing these new applications may further delay implementation of the alternative strategies to specific licensing.

#### Advantages

- Ensures protection of public health and safety and the environment under current regulations while alternative to specific licensing is developed and implemented
- No legal, perception, or enforcement concerns

#### Disadvantages

- Would require substantial expenditure of resources by drinking water treatment facilities, and NRC and Agreement State regulators to specifically license impacted facilities prior to implementation of an alternative approach.
- Would be necessary to expend resources on developing guidance for both applicants and NRC and Agreement State license reviewers
- May impact schedule of implementing an alternative to specific licensing

### **OPTION 2: Issue Orders to Impose Specific Requirements Within the Existing Regulatory Requirements**

The Commission could issue orders to each drinking water treatment facility that would require a license. The order would issue a license and impose certain aspects of the regulations that these facilities should meet in order to ensure worker and public health and safety, and would likely be similar to many of the requirements expected for the alternative to specific licensing chosen by the Commission. However, the facilities would still be required to meet the existing regulatory requirements, unless some enforcement discretion was also exercised. The order would impose conditions specific to drinking water treatment facilities, in lieu of each facility applying for a license.

#### Advantages

- Would limit resource costs to industry only to those items deemed important at this time to maintain worker and public health and safety.

- No resources would be necessary for developing or reviewing specific license applications.

#### Disadvantages

- Orders would be on a facility by facility basis rather than to industries as a whole and therefore the resources necessary to issue orders to each separate facility could be significant.
- Would be extremely difficult to identify who would require an order.
- Could be challenged as an improper rulemaking.
- Unless the order remained within the scope of the existing regulations, the facilities could be in violation of the regulations and would require enforcement discretion until the regulations were revised.
- Less than optimal way to license these facilities and would not endear public confidence.

#### **OPTION 3:** Exercise Enforcement Discretion to Not Cite for Possession, Use, Transfer, or Disposal of Source Material Provided Certain Conditions Are Met

Under this option, NRC would not actively enforce the existing regulations requiring a specific license, for the possession, use, transfer and disposal of source material, for the treatment of drinking water to remove uranium, while developing a regulatory alternative to specific licensing of drinking water treatment facilities. The period of enforcement discretion would only be until such time that a regulatory alternative was enacted. However, drinking water treatment facilities would be expected to maintain adequate worker and public health and safety, manage the source material, and properly dispose of the source material. If the staff identifies a public health and safety issue that was not envisioned during the development of the enforcement discretion guidance, the staff will revise the guidance to address this new concern, which could result in the need for some water treatment facilities to still obtain a specific license for possession and use of the source material.

The staff would issue a generic communication that would describe the use of enforcement discretion for these facilities and provide information to the drinking water treatment facilities with conditions that must be met and maintained in order for the NRC to exercise enforcement discretion. The generic communication would include information regarding maintaining adequate public and worker health and safety and protection of the environment; proper handling, storage, and disposal; and reporting. The exact content of the generic communication would be dependent upon which regulatory approach (if any) the Commission chose to pursue to modify the existing regulations for the drinking water treatment facilities (i.e., the information included in a generic communication during the development of a new general license may be different than that for development of an exemption). The generic communication would describe operational limits (e.g., concentration levels, types of processes, or amounts of source material that may be stored on site) that the facility would have to meet and maintain in order to be considered for enforcement discretion. The enforcement discretion criteria may forecast the staff's initial views of the future rulemaking activity.

As long as the drinking water facility met the provisions described in the generic communication, the staff would exercise enforcement discretion to not cite the facility for possession, use, transfer, or disposal of source material without an NRC license. Should the

staff determine, at any time, that the provisions described in the generic communication are not being met, they could find the drinking water treatment facility operator in violation of the regulations and require the operator to apply for a specific license, and/or take other action, as appropriate.

The staff would expect to issue a generic communication within 120 days of Commission direction. The staff requires this time to develop the basic provisions to be described in the generic communication because it must be sufficiently robust to ensure adequate protection of the public health and safety while the rule is being developed. Additionally, a minimum of 30 days is necessary to allow for Agreement State comment.

#### Advantages

- Would require no expenditure of resources by operators, NRC, or Agreement States to support specific licensing of these facilities except for unusual cases.
- The potential resource savings for not having a specific license would be incentive for maintaining proper worker and public health and safety and ensuring proper disposal (i.e., performance-based regulation).
- Allows time for NRC and Agreement States to implement any chosen alternative to specific licensing.
- The limits established for enforcement discretion would be sufficient to protect worker and public health and safety and would provide the staff's current thinking on the future rulemaking.

#### Disadvantages

- Public may be concerned that NRC is not actively enforcing its own regulations.
- Some resources would be expended on developing and issuing a generic communication; however, it is expected much of the information provided in the generic communication would be based upon the chosen regulatory action and incorporated in the basis of any rulemaking. Therefore, the direct cost would be relatively low.
- Cost to implement and maintain the discretion policy.

#### **OPTION 4:** Request EPA to Defer Implementation of Rule for Uranium

Under this option, NRC would formally request EPA to defer implementation of their rule in respect to uranium until NRC enacts an alternative to specific licensing. Such a deferral could postpone the actual concentration of uranium until NRC has a new regulatory structure in place saving resources for both industry, NRC, and the Agreement States. However, based upon informal discussions with EPA, it is likely that EPA would reject such a request. Furthermore, because most facilities are likely in the process of self-identifying levels of uranium in their drinking water that warrant action under the EPA rule, even if implementation of the rule were deferred, those facilities which already identified high uranium levels would likely face public pressure to treat the water for uranium immediately.

### Advantages

- If EPA agreed to this option, there would be minimal resource costs to operators, NRC, and Agreement States while NRC implemented an alternative to specific licensing
- Would reduce impact to workers (from lack of need to concentrate, store, or dispose of uranium) at this time
- Would postpone concerns regarding disposal of concentrated uranium

### Disadvantages

- Would potentially cause members of the public to consume water with uranium at higher levels than the EPA rule currently allows
- EPA would be required to expend resources notifying treatment facilities of the deferral of the rule implementation date
- May cause public concern that their water is not safe and not being treated

### RECOMMENDED APPROACH

**OPTION 3:** Should the Commission decide to pursue an alternative to specific licensing for persons treating drinking water for uranium, the staff recommends that the NRC apply enforcement discretion to those persons treating drinking water for uranium while the staff is developing the alternative to specific licensing. Because the intent of pursuing an alternative strategy is to provide an adequate level of protection to workers and public health and safety and the environment while limiting the resources expended by the drinking water treatment industry, NRC, and the Agreement States, the staff believes this approach will provide the most efficient use of resources. Under this recommended option, minimal resources could be expended by the regulatory agencies in notifying drinking water treatment facilities (e.g., through industry contacts) through a new generic communication of the provisions for enforcement discretion to apply, and that specific licensing will not be required at this time, except for circumstances that fall beyond the provisions described in the generic communication. NRC and the Agreement States will still maintain the authority to specifically license those facilities which either (1) request a specific license or (2) do not meet the provisions of the enforcement discretion guidance and as a result do not maintain adequate worker and public health and safety or do not properly dispose of wastes containing concentrations of uranium that would normally require specific licensing. The staff believes that the significant costs estimated to be associated with specifically licensing a drinking water treatment facility will be a strong deterrent such that the operator will adequately maintain worker and public health and safety and properly dispose of any wastes, making this option performance-based. This policy of enforcement discretion will expire upon the implementation date of a selected alternative to specific licensing, although NRC has the option of enforcing the existing regulations, if determined to be necessary, at any time.

It should be noted that although NRC may opt to exercise enforcement discretion regarding specifically licensing drinking water treatment facilities, some Agreement States may decide not to implement a policy of enforcement discretion and may instead specifically license those facilities. Although the NRC staff believes that many Agreement States will take the same or similar regulatory positions as NRC because of the resource implications, those Agreement States that do not exercise enforcement discretion would reduce the resource savings to those

facilities located therein and for the Agreement State itself. Because many of the alternatives to specific licensing may require Agreement State compatibility, it is expected that the Agreement States would exercise enforcement discretion to limit the possibility of expending resources to specifically license a facility that may later need to be terminated in order to implement and be compatible with the alternative to specific licensing. Finally, Agreement States' enforcement programs are not required to be compatible with NRC's enforcement program, so the extent that any State would need or choose to exercise enforcement discretion, while an alternative regulatory approach is being developed, depends on the specifics of that State's own enforcement program.