

# **POLICY ISSUE NOTATION VOTE**

March 9, 2006

SECY-06-0056

FOR: The Commissioners

FROM: Luis A. Reyes  
Executive Director for Operations

SUBJECT: IMPROVING TRANSPARENCY IN THE 10 CFR 20.2002  
PROCESS

## PURPOSE:

In Staff Requirements Memorandum (SRM) COMGBJ-05-001, "Improving Transparency in the 10 CFR Sec. 20.2002 Process," the Commission directed the staff, working with the Office of the General Counsel (OGC), to develop options to enhance public understanding and awareness of 10 CFR 20.2002 approvals and to provide recommendations to the Commission. The recommendations were to identify potential adverse impacts on the U.S. Nuclear Regulatory Commission's (NRC's) well-established regulatory framework. The Commission also directed the staff to ". . . encourage stakeholder input by individuals who may be directly affected by an NRC decision." This paper responds to these requests.

## BACKGROUND:

10 CFR 20.2001 (Enclosure 1) identifies the mechanisms by which a licensee may lawfully dispose of its licensed radioactive waste. It contains seven different disposal paths, including 10 CFR 20.2002, a provision for "alternative disposal" authorizations. Section 20.2002 is a general provision that allows for other disposal methods, different from those already defined in the regulations, provided that doses are maintained ALARA and within the dose limits in Part 20. In practice, 10 CFR 20.2002 is most often used for disposal of radioactive waste in hazardous or solid waste landfills that are permitted under the Resource Conservation and

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Recovery Act, but it can be used for any type of disposal not already defined in the regulations, such as disposal on a licensee's site or on offsite private property. With the exception of the initial licensing of a Part 61 disposal site, none of the disposal mechanisms in Subpart K has special public involvement requirements. Additional background on the history of 10 CFR 20.2002 in NRC's regulations and on licensee use of this provision is contained in Enclosure 2.

With a few exceptions, public interest in both onsite and offsite 10 CFR 20.2002 approvals has been limited. However, there have been two authorizations that did generate significant public interest in the recent past. In 2001, Consumers Power, the licensee for the Big Rock Point Nuclear Power Plant, proposed the disposal of large quantities of demolition debris from decommissioning in a nearby landfill. Before obtaining NRC approval under 10 CFR 20.2002, the licensee conducted a number of town meetings with stakeholders and members of the public on the proposed disposal. NRC participated in the licensee's meetings, and held its own public meeting as well. The authorization was granted in 2002. In 2005, NRC received a number of letters from members of Congress and others expressing concerns with a proposed disposal of large amounts of demolition debris from the Connecticut Yankee power plant at a hazardous waste disposal facility in Idaho. Although the disposal facility that was proposed routinely accepts large amounts of radioactive material, this would have been the first such disposal at this facility from a nuclear power plant undergoing decommissioning. One factor that affected the level of interest in the Connecticut Yankee proposal was NRC's proposed rulemaking on the disposition of solid material. The NRC staff's proposed rule package was released to the public one day before NRC's approval of the 10 CFR 20.2002 disposal, and letters to NRC expressed concern that NRC was implementing the rule before it had been promulgated. Neither the disposal facility operator nor the generator decided to pursue the waste's acceptance at the facility. Since then, NRC has approved five 10 CFR 20.2002 requests from licensees without any significant public interest.

#### DISCUSSION:

The staff has developed three options for addressing how NRC can: a) enhance public understanding and awareness of 10 CFR 20.2002 disposals; and b) encourage stakeholder input by those "directly affected" by an NRC 10 CFR 20.2002 approval, as directed by the SRM. Potential adverse impacts on NRC's regulatory program are also identified. Enclosure 3 contains a detailed description of the options and advantages and disadvantages of each. A summary of each option is provided below.

The first option is a "no-action" alternative that reflects current practice. Information on specific 10 CFR 20.200 requests from licensees is available to the public in the Agencywide Documents Access Management System (ADAMS) and in the public document room. Generic information is very limited, however, and none is available on the NRC public web site. With respect to staff receiving input from those directly affected by a 10 CFR 20.2002 request, there may be several opportunities, depending upon the type of request:

- Affected States are provided a copy of a draft environmental assessment (EA) for review and comment before the final EA is published.
- In certain cases, where there is significant interest in a proposed disposal and unique circumstances, the staff may hold a public meeting to solicit input from the public.
- Materials and fuel cycle 10 CFR 20.2002 requests are approved with a license amendment, thus affording an opportunity for a hearing. (Reactor approvals are generally granted with a letter, and there is no opportunity for hearing).

- Depending on the specific request, the staff may obtain information from the State permitting agency and disposal facility operator related to the request during the review.

The primary advantage of the current approach is that it can be viewed as appropriate because 1) the number of 10 CFR 20.2002 requests received each year is small (an average of twenty in the last six years), 2) the risk-significance of the 10 CFR 20.2002 authorizations is low, and 3) with the exception of a few cases in the last several years, the level of public interest has been small. The primary disadvantage of this option is that there would continue to be no basic information on 10 CFR 20.2002 authorizations available to the public, and whatever misunderstandings exist today would likely continue.

The second option recognizes that there are significant differences in the types of 10 CFR 20.2002 disposals that are requested by licensees, and that a graded approach for transparency may be appropriate. This option would both provide basic, generic information on 10 CFR 20.2002 disposals on the NRC's public web site, as well as define and document a more systematic approach for interacting with the public and obtaining input on particular requests than current practice. The primary advantage of this approach is that it would increase public understanding and awareness and provide for input from stakeholders, without a large expenditure in staff resources. At the same time, a disadvantage is that these resources would be expended for a small number of requests for such disposals (twenty in the last six years).

The third option treats 10 CFR 20.2002 requests in a manner similar to high-visibility NRC activities, such as the renewal of a power reactor license. "Real-time" information would be posted on the NRC's public web page regarding the status of all reviews, along with links to documents in ADAMS. In addition, reactor 10 CFR 20.2002 requests would be approved with a license amendment, thus affording an opportunity for a hearing. The advantage of this option is that it would provide stakeholders to determine quickly and efficiently the status of individual reviews, obtain important documents related to the request, and understand what opportunities there might be for public input. The disadvantage is that the level of effort to implement the option would be significant compared to the first two options. In addition, if a reactor hearing were necessary, significantly more resources might be needed. A hearing could also cause a significant delay in NRC's decision on a request.

#### COMMITMENTS:

The staff will provide the Commission with the results of its analysis of how 10 CFR 20.2002 approvals are granted (by license amendment in the Office of Nuclear Material Safety and Safeguards and by letter approval in the Office of Nuclear Reactor Regulation) and whether any changes may be appropriate, as discussed in Option 1, Enclosure 3.

#### RECOMMENDATION:

The staff recommends Option 2 for improving transparency in NRC's 10 CFR 20.2002 process. This option would increase the background information available to the public on 10 CFR 20.2002 disposals, and apply resources for additional public outreach to case-specific requests based on defined criteria. It would also: (1) minimize the resource impacts on the low-level

waste (LLW) budget, which is currently 5.0 full-time equivalent (FTEs) in FY 07; (2) appropriately weigh, in the staff's view, NRC's strategic goal of openness with its safety, security, and effectiveness goals for this particular type of regulatory action; and (3) enable NRC to have flexibility in addressing the wide variety of 10 CFR 20.2002 disposals.

It should be noted that the staff intends to formalize and document the procedure for reviewing 10 CFR 20.2002 requests, independent of the transparency measures identified in this paper. The Commission's decision on which measures the staff should implement to improve transparency would be included when this procedure is developed.

#### RESOURCES:

For planning purposes, the staff has assumed six 10 CFR 20.2002 requests per year, with one that meets the proposed criteria for additional outreach measures, based on the history of requests received over the last 6 years (see Enclosure 4). Two of these six requests would be from nuclear power reactor licensees and, for Option 3, would require some additional resources to issue a license amendment. Implementing Option 2 would require a one-time investment of 0.3 FTE to develop generic communications tools and 0.2 FTE/yr to maintain them and conduct public meetings. Option 3 would require 0.6 FTE to develop both the communication tools and a web page that provides "real-time" information on 10 CFR 20.2002 requests under review. It would also require 0.4 FTE each year to implement, assuming there were no reactor hearings. If a hearing were requested, the resources could range from a few staff weeks to several FTEs, depending upon the case. Enclosure 5 summarizes these resource estimates, and includes a column identifying the time added to the review for each, as well.

10 CFR 20.2002 authorizations are currently performed as part of routine casework and resources are not specifically budgeted for these reviews. Most of the annual resources for reviewing specific requests would come from the materials, fuel cycle and reactor licensing programs. If Option 2 or 3 were to be implemented, however, the one-time resources needed for the communication tools would come from the LLW program budget for Fiscal Year (FY) 2007. Staff would use the planning, budgeting, and performance management process, as resources for this activity are not included in the budget. Projects whose schedule could be affected include updating the LLW storage guidance, developing a staff procedure for processing 10 CFR 20.2002 requests, or staff's response to the Commission's request to consider the potential reclassification of depleted uranium.<sup>1</sup> The Office of Nuclear Material Safety and Safeguards LLW budget for FY '07 is 5.0 FTEs and \$57,000.

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<sup>1</sup> See Memorandum and Order CLI-05-20 in connection with the Louisiana Energy Services hearing.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has also reviewed the paper and concurs.

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Enclosures:

1. 10 CFR Part 20, Subpart K, and 10 CFR 20.2002 Waste Disposal Provisions
2. History of 10 CFR 20.2002 in NRC's Regulations and Its Use by Licensees
3. Options for Improving Transparency in the 10 CFR 20.2002 Process.
4. Summary of 20.2002 Requests Received Since January 1, 2000
5. Resources for Options Presented in Commission Paper
6. Specific Activities and Associated Resources to Increase 10 CFR 20.2002 Transparency
7. Agency Communication Tools

## 10 CFR Part 20, Subpart K, and 10 CFR 20.2002 WASTE DISPOSAL PROVISIONS

### Subpart K--Waste Disposal

#### § 20.2001 General requirements.

- (a) A licensee shall dispose of licensed material only--
  - (1) By transfer to an authorized recipient as provided in § 20.2006 or in the regulations in parts 30, 40, 60, 61, 63, 70, and 72 of this chapter;
  - (2) By decay in storage; or
  - (3) By release in effluents within the limits in § 20.1301; or
  - (4) As authorized under §§ 20.2002, 20.2003, 20.2004, or § 20.2005.
- (b) A person must be specifically licensed to receive waste containing licensed material from other persons for:
  - (1) Treatment prior to disposal; or
  - (2) Treatment or disposal by incineration; or
  - (3) Decay in storage; or
  - (4) Disposal at a land disposal facility licensed under part 61 of this chapter; or
  - (5) Disposal at a geologic repository under part 60 or part 63 of this chapter.

#### § 20.2002 Method for obtaining approval of proposed disposal procedures.

A licensee or applicant for a license may apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to dispose of licensed material generated in the licensee's activities. Each application shall include:

- (a) A description of the waste containing licensed material to be disposed of, including the physical and chemical properties important to risk evaluation, and the proposed manner and conditions of waste disposal; and
- (b) An analysis and evaluation of pertinent information on the nature of the environment; and
- (c) The nature and location of other potentially affected licensed and unlicensed facilities; and
- (d) Analyses and procedures to ensure that doses are maintained ALARA and within the dose limits in this part.

## HISTORY OF 10 CFR 20.2002 IN NRC'S REGULATIONS AND ITS USE BY LICENSEES

10 CFR 20.2002 and its predecessors, 10 CFR 20.304 and 20.302, have been in the U.S. Nuclear Regulatory Commission's (NRC's) regulations and available for use by licensees since 1959. 10 CFR 20.302 was used to license the early low-level radioactive waste (LLW) disposal sites before 10 CFR Part 61 was promulgated in 1982. Part 61 disposal facilities are designed for the disposal of all but the most highly radioactive LLW. To ensure safety and the protection of the environment, Part 61 provides detailed requirements for the performance of LLW disposal facilities, along with specific siting, design, operations, and closure requirements. Although most of the radioactivity in LLW generated by NRC licensees is disposed in facilities licensed under Agreement State regulations compatible with and/or similar to Part 61, 10 CFR 20.2002 continues to be available for use by licensees for wastes that are a small fraction of the Class A limits contained in Part 61, and for which the extensive controls in the Part 61 are not needed to ensure protection of the public health and safety and the environment. Thus, 10 CFR 20.2002 provides for more risk-informed disposals of these low-end materials.

NRC has received more than 100 requests in the last 30 years for 10 CFR 20.2002 approvals. Although about two-thirds of these were for onsite disposals, the trend in recent years has been for fewer onsite and more offsite disposals. Since 2000, NRC has received 20 requests for 10 CFR 20.2002 alternate disposal authorizations, 17 for offsite disposal (see Attachment 3 for a listing of these requests). Fourteen have been granted, and 6 are currently under review. Those granted include 5, from nuclear power plants, involving the offsite disposal of large quantities (tens of thousands of cubic meters) of very low levels of radioactivity in permitted landfills. Only two of these authorizations, however, have been used, both from the same facility (Big Rock Point). Other types of 10 CFR 20.2002 approvals have included; (1) disposals on the licensees' property; (2) disposal of short-lived waste in oil wells; and (3) disposal of incinerator ash from universities and research laboratories in landfills<sup>1</sup>. Concentrations are typically below those that would cause a dose in excess of 1 mrem/yr if released for any use and without any controls,<sup>2</sup> and are a fraction of the Class A limits for LLW contained in Part 61.

10 CFR 20.2002 requests may be for either disposal offsite, typically at a municipal solid waste or hazardous waste landfill, or on a licensee's site. NRC does not expect to address offsite disposals after they occur. Onsite disposals, however, are addressed by the licensee and NRC at decommissioning to ensure that when the license is terminated, the site meets the criteria in

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<sup>1</sup>In accordance with NRC's Policy and Guidance Directive 8-10, "Disposal of Incinerator Ash as Ordinary Waste," January 1997.

<sup>2</sup>As defined in International Atomic Energy Agency Safety Guide RS-G-17, "Application of the Concepts of Exclusion, Exemption, and Clearance."

the license termination rule in Subpart E of 10 CFR Part 20.<sup>3</sup> Since they are onsite, they are also under the licensee's control throughout the time the license is in effect. These differences between onsite and offsite disposals likely affect the level of public interest.

Many 10 CFR 20.2002 disposals are similar to other disposals of other radioactive materials in landfills and hazardous waste facilities that occur routinely in the U.S. Among the authorized disposal facilities of radioactive materials in the U.S. are hazardous waste facilities, in California and Colorado, which accept radioactive wastes in concentrations up to 2000 pCi/gram total radioactivity, and Michigan solid waste landfills which are allowed to accept waste containing up to 50 pCi/gram of radium-226. In addition, Louisiana allows for oilfield waste containing up to 30 pCi/gram radium-226 to be disposed of in non-hazardous oilfield disposal facilities. The U.S. Ecology Idaho facility and the Waste Control Specialists facility in Texas, in addition to accepting Atomic Energy Act materials, also accept naturally occurring radioactive materials.

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<sup>3</sup>The staff recently published draft guidance in NUREG-1757 Supplement 1, "Consolidated NMSS Decommissioning Guidance: Updates to Implement the License Termination Rule Analysis," that describes steps the licensee needs to take to ensure that these disposals are accounted for in the subsequent decommissioning and release of the site under the license termination rule in Subpart E of 10 CFR Part 20. Public input was obtained through an April 2005 workshop and a Federal Register Notice.

## **OPTIONS FOR IMPROVING TRANSPARENCY IN THE 10 CFR 20.2002 PROCESS**

There are a number of specific actions NRC could take to improve awareness and understanding or to involve those directly affected by a 10 CFR 20.2002 disposal (see Attachment 4 for a listing of these). In the options below, the staff has presented what it believes to be logical groupings of these various activities, covering a range of staff resources to implement and additional time for staff review and approval, for Commission consideration.

### Option 1

Under this option, staff would take no additional actions to improve transparency. It is presented as a baseline against which to compare Options 2 and 3.

Information on specific 10 CFR 20.2002 disposal requests is currently available to the public through Agencywide Documents Access and Management System (ADAMS) and the public document room. Its availability is similar to that for other NRC authorizations granted to licensees. This information typically consists of the incoming request, correspondence between NRC staff and the licensee, and final approvals consisting of an environmental assessment, a Finding of No Significant Impact, and a safety evaluation. However, there is little or no background information on the 10 CFR 20.2002 disposal provision written for the public, either in NUREGs or on the NRC public web site. With respect to public involvement, the current 10 CFR 20.2002 review process allows for some participation by stakeholders, principally the affected States that are given an opportunity to comment on a draft of the environmental assessment (EA) for any proposed disposal. The staff's Finding of No Significant Impact from the EA, that describes the staff's basis for such a conclusion and gives information on how to obtain the relevant documents, is noticed in the *Federal Register*.

For materials and fuel cycle licensees, the Office of Nuclear Material Safety and Safeguards (NMSS) and the Regions typically approve 10 CFR 20.2002 requests with a license amendment, and thus there is an opportunity for an informal hearing. For reactor licensees, however, NRC approves 10 CFR 20.2002 disposals with a letter, without amending the license, and thus there is no opportunity for a hearing for all these requests. The staff or the licensee, at its discretion, may provide opportunities for public input, depending the circumstances and interest.<sup>1</sup> In the case of the 10 CFR 20.2002 request from the licensee for the Big Rock Point plant in 2001, for example, the Office of Nuclear Reactor Regulation (NRR) held its own meeting, and participated in town meetings sponsored by the licensee, in which the State and other stakeholders participated.

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<sup>1</sup> See NRC's January 21, 2005, letter, to the Snake River Alliance, (ML050120480) which provides a rationale for using letter approvals for reactors. Separately, the staff will investigate whether fuel cycle and materials licensee 10 CFR 20.2002 approvals should be consistent with reactor approvals, and report the results to the Commission.

## Advantages

This option would save resources that would otherwise be spent on Options 2 or 3, since no new efforts would be made to enhance public understanding and awareness, or to provide for increased stakeholder comment on proposed 10 CFR 20.2002 disposals. In addition, maintaining the status quo could be seen as appropriate for the small number of 10 CFR 20.2002 requests received each year (an average of three and up to seven), the low-risk significance and environmental consequences of these disposals, and the need to be consistent with the treatment of other NRC approvals of licensee requests.

Further, many of the 10 CFR 20.2002 disposals are similar to other disposals of radioactive materials in landfills and hazardous waste facilities that occur routinely in the U.S. (See Enclosure 2 for a partial listing of these facilities). Finally, this option enables NRC to respond to 10 CFR 20.2002 requests, consistent with the needs and circumstances for the specific request. Where warranted, the staff would, as it did for the Big Rock Point 10 CFR 20.2002 authorization, participate in and/or conduct public meetings.

## Disadvantages

Maintaining the status quo would mean that basic information on 10 CFR 20.2002 authorizations, tailored to members of the public, would not be generally available which could perpetuate any misunderstandings or lack of awareness of the use of this provision that currently exists. Aside from information provided in responses to requests from the public or in public meetings that might be held in connection with specific 10 CFR 20.2002 proposals, there would be little opportunity for members of the public to understand this provision in the regulations and how it is implemented. Also, some stakeholders might argue that the general lack of interest to date (with certain exceptions) is caused by the lack of readily available information.

Maintaining the status quo would also potentially place NRC in a reactive position for future such authorizations where there was significant public interest.

## Option 2

10 CFR 20.2002 requests can range from proposed onsite disposals of small quantities of waste that will decay to background levels by the time of decommissioning, to offsite disposals of tens of thousands of cubic meters (millions of cubic feet) of demolition debris at a local landfill that has never accepted such waste before. The assumption underlying this option is that although additional measures for transparency are desirable, a graded approach that recognizes the significant differences in the types of 10 CFR 20.2002 disposals is appropriate. Under current practice, the staff already may allow for increased interactions with the public when justified. However, this option would both greater background information for the public on 10 CFR 20.2002 disposals in general, and would also define a more systematic approach for interacting with the public than the current approach. This option has the following elements:

- The development of the standard Agency communication tools (fact sheets, backgrounders, communication plans, etc.) that would provide generic information on 10 CFR 20.2002 disposals for the public. (See Attachment 5 for details on these tools). This information would also be integrated into NRC's waste disposal pages on the public web site.

- The issuance of a *Federal Register* notice announcing the receipt of a significant 10 CFR 20.2002 request, along with a communication plan for that specific request.<sup>2</sup> A public meeting could be included in the Communication Plan, depending on the circumstances.
- The formalization in an agency procedure(s) of the interactions between and among the licensee, NRC, the State permitting agency (when disposal is in a permitted facility), and the disposal facility operator, for significant 10 CFR 20.2002 authorizations, to ensure adequate communication regarding the proposed disposal.

A principal component of this approach is the use of existing Agency communication tools, which have not been used to date for 10 CFR 20.2002 authorizations. In developing these tools, the staff would provide generic information such as:

- Why 10 CFR 20.2002's authorizations are needed.
- The history of 10 CFR 20.2002 in NRC regulations.
- How safety is assured when NRC reviews a 10 CFR 20.2002 request.
- How any potential environmental impact is evaluated.
- What materials are typically disposed of under 10 CFR 20.2002 and their relative hazards.
- How 10 CFR 20.2002 disposals are similar or dissimilar to types of radioactive wastes and their disposal (e.g., technically enhanced naturally occurring radioactive material (TENORM) and higher-activity LLW).
- How to get additional information from NRC.

In addition to generic information being developed and posted on the public web site, the staff would implement extra outreach measures for 10 CFR 20.2002 requests that were significant. Listed below are preliminary criteria that would guide decisions on whether additional outreach measures were necessary. A request would not be considered significant and no special measures would be needed when:

- The proposed disposal will be in a facility that routinely disposes of large quantities of similar radioactive materials, in accordance with its permit;
- The proposed 10 CFR 20.2002 disposal involves small quantities and concentrations of materials (e.g., incinerator ash from research facilities disposed of in accordance with Policy and Guidance Directive 8-10, "Disposal of Incinerator Ash as Ordinary Waste");
- The proposed disposals involve a high degree of certainty that the scenarios and assumptions used for the dose analyses are appropriate, based on past approvals, and will ensure that doses will be within "a few mrem/yr" exposure to a member of the public; or,
- The proposed disposal is on a licensee's site.

Notwithstanding the above guidelines, there could also be instances in which a public meeting was warranted, based on requests from the public, elected officials, the State, the licensee, or for other reasons. The staff does not expect most of the 10 CFR 20.2002 approval requests

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<sup>2</sup> Sites undergoing decommissioning already have communication plans, which would be revised to address the specific 10 CFR 20.2002 request.

received to require any expanded effort. In the resources section, based on the history of 10 CFR 20.2002 disposals approved by NRC, the staff has assumed there would be one request each year that did not meet the above criteria and would require enhanced outreach measures.

Another component of this option that is different from current practice would be to enhance communications and coordination among the licensee requesting the authorization, the disposal facility operator, and the State and/or local permitting agency for certain proposed disposals, and to document these interactions in a staff procedure. In determining whether measures were necessary, staff would consider the criteria listed above and responsible agencies' desire for involvement, along with staff's need to understand permit conditions, dose scenarios, etc., pertinent to its review. Currently, NRC provides a copy of the draft EA for a proposed 10 CFR 20.2002 disposal to the affected States for comment, near the end of the review process. NRC's interactions during the review have often been with the licensee only and there is no defined process for involving the State (before the draft EA is prepared) or facility operator. Although the licensee has primary responsibility for ensuring the safety of such disposals, under this option, the staff would provide for periodic communications early and throughout NRC's review with all three of these entities. These efforts would include placing the responsible agency and disposal facility operator on distribution for correspondence, such as requests for information, and periodic conference calls to discuss the status of the review. Also, if a proposed disposal were on private property, the procedure require that the landowner was informed of the request and NRC's actions.

#### Advantages:

Using the Agency's existing communications tools is a structured and efficient way for communicating with the public. There is extensive guidance available to the staff on developing these tools, and many models for the staff to follow. The information in these documents would also fill a void, since there is no generic information written for the public on these types of disposals at this time. In addition, 10 CFR 20.2002 authorizations logically fit within the low-level waste (LLW) disposal web page, since it is a subset of the methods by which LLW is disposed. The current LLW page only addresses Part 61 disposal facilities. Such information would also promote awareness of risk-informed regulation of radioactive materials, by discussing how and why some types of low-activity LLW can be disposed of in facilities other than a Part 61 facility. This information would also be useful to the staff in responding to stakeholder inquiries, participating in meetings with the public, ensuring that staff communications are effective, and would make these future efforts more efficient, since background material would be available for use. This option would require relatively few resources to implement, and most of the resources needed would be a one-time expense. The staff expects that a minimal resources would be needed annually to update the communication tools and web site.

#### Disadvantages:

As noted in Option 1, aside from two cases in the last 5 years, there has been little public interest in these types of disposals by the public and, thus, investment of resources may not be appropriate when the Agency's other goals of safety and effectiveness are considered. NRC only processes about three to seven such requests each year. This option assumes that one request each year would require a public meeting. Holding a public meeting requires significant resources to notice the meeting, pay for travel expenses, develop and deliver presentations and

respond to comments. A public meeting will also add a month to six weeks to the review schedule. Finally, implementing these additional measures for outreach could set a precedent for other types of waste disposals, including new provisions currently being developed to address the disposal of 11e.(3) and 11e.(4) byproduct material.

### Option 3

Under this option, 10 CFR 20.2002 authorizations would be treated like other high-visibility NRC activities, such as the renewal of a power reactor license, the licensing of an enrichment plant, or any other activity for which there is high public interest. The underlying assumption for this option is that, notwithstanding the safety and other arguments presented earlier in this paper, significant steps should be taken to make information readily available and to seek public input. Under this option, all 10 CFR 20.2002 disposal requests from licensees would have new transparency measures, including onsite disposals and other more routine actions such as disposal incinerator ash in landfills. In addition to including all of the items in Option 2, this approach would also provide for “real-time” information on the NRC public web page regarding the status of all 10 CFR 20.2002 reviews. NRC’s web site would have a page devoted to 10 CFR 20.2002 requests under review, including links to pertinent documents in ADAMS. Some of NRC’s major licensing actions use web pages that are models for the types of information and design that could be used. They include nuclear power plant license renewal applications<sup>3</sup> and applications for new uranium enrichment plants.<sup>4</sup> Also included in this option would be the approval of reactor 10 CFR 20.2002 requests with a license amendment, rather than a letter. This change would provide another mechanism for the public to be involved.

#### Advantages:

In addition to the advantages discussed under Option 2, providing “real-time” information on the status of 10 CFR 20.2002 reviews and relevant documents, would allow stakeholders to determine quickly and efficiently how a review was progressing, obtain important documents related to the request, and understand what opportunities there might be to provide input to NRC’s review. If such information were available it might mitigate the types of concerns that were expressed by members of Congress and other stakeholders regarding the proposed disposal by the Connecticut Yankee licensee in 2005.

#### Disadvantages:

The staff believes that there are several significant disadvantages with this option, in addition to those identified under Option 2 (Option 3 includes Option 2 activities as well). The level of effort to develop and maintain a web page with information on specific requests would be comparatively large (0.3 full-time equivalent (FTE) per year), when considering the risk and safety significance of 10 CFR 20.2002 disposals with other licensing activities that employ this approach. A further reason is that, to date, such extensive web pages have been reserved for major NRC licensing actions, such as license renewals for nuclear power plants and license

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<sup>3</sup> See <http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html>

<sup>4</sup> See <http://www.nrc.gov/materials/fuel-cycle-fac/gas-centrifuge.html>

applications for new uranium enrichment facilities. NRC does not presently develop such web pages for applications for materials licenses. Thus, developing such a web page would be inconsistent with other NRC regulatory actions. Further, the level of interest in such requests varies and, in many cases, the staff expects that there would be little or no interest in the content on the web pages. The initial resources to develop this option (including the "real-time" web page, e.g.) would consume somewhat more than 10% of the fiscal year (FY) 2007 budgeted resources for the LLW program. This option could also require significantly more resources if a reactor hearing were necessary. A hearing would also extend the review time significantly.

OFFICIAL USE ONLY – SENSITIVE INTERNAL INFORMATION

SUMMARY OF 10 CFR 20.2002 REQUESTS RECEIVED SINCE JANUARY 1, 2000

Licensee	Date Submitted	Date Approved	Disposal Method	Materials Involved	Comments
US Army Corps of Engineers, Stepan Chemical Co. site in Maywood, N.J.	December 16, 2005	Pending	RCRA hazardous waste landfill (U.S. Ecology Idaho)	Processing residuals with uranium, thorium and radium (11e.(2) byproduct material)	Army Corps is not an NRC licensee. NRC response to this request is being developed.
Yankee Atomic	October 31, 2005	Pending	Retaining wall at an offsite property	Approx. 500 cubic feet, 90 pCi/g of H-3, and up to 162 pCi/g avg. of C-14.	
U.S. Army, Aberdeen Test Center	September 13, 2005	Pending	RCRA hazardous waste landfill (U.S. Ecology Idaho)	Two M2A2 Bradley fighting vehicles with depleted uranium contamination	
Tennessee Valley Authority, Watts Bar Nuclear Plant	August 26, 2005	Pending	Onsite disposal	In-situ disposal of liquid effluent line until decommissioning	
UCAR	May 13, 2005	Pending	RCRA hazardous waste cell (WCS)	15 intermodal containers of LAW.	On hold, proposed disposal facility not currently authorized to accept these materials.

OFFICIAL USE ONLY – SENSITIVE INTERNAL INFORMATION

Licensee	Date Submitted	Date Approved	Disposal Method	Materials Involved	Comments
Connecticut Yankee	January 4, 2005	Pending	Waste Control Specialists RCRA facility	1 million cubic feet of demolition debris containing misc. byproduct materials.	On hold, proposed disposal facility not currently authorized to accept these materials.
Yankee Atomic	December 22, 2004	May 6, 2005	Waste Control Specialists RCRA facility	60 million pounds of demolition debris (approximately 600,000 cubic feet) containing up to 20 pCi/g of Co-60 and 100 pCi/g of Cs-137 and up to 198 pCi/g of H-3	Licensee decided against this disposal option.
Cabot Supermetals	November 24, 2004	July 15, 2005	Cement kiln	Wastewater filtercake containing up to 10 pCi/gram uranium, and 3 pCi/gram of thorium, 20,000 tons annually	
Vermont Yankee	October 4, 2004	July 19, 2005	Onsite disposal	Soil/sand from misc. activities onsite—silt from cooling towers, sand for ice/snow on roads, etc. Previously approved limit was 28 cubic meters/yr (approx. 1000 cubic feet/yr). This request was to increase that amount for 150 cubic meters/yr (5300 cubic feet/yr). Less than 1 pCi/gram Cs-137 and Co-60.	

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Licensee	Date Submitted	Date Approved	Disposal Method	Materials Involved	Comments
Connecticut Yankee	September 16, 2004	April 19, 2005	US Ecology Idaho RCRA facility	Approx. 1 million cubic feet of demolition debris. Cs-137, Co-60, C-14, and H-3 concentrations are very small. Other radionuclides also present.	US Ecology Idaho decided not to pursue this disposal.
Consumers Energy, Big Rock Point Plant	September 15, 2004	January 19, 2005	Landfills in Michigan	500,000 cubic feet of demolition debris, Cs-137, Co-60, and H-3, at low concentrations	This was an amendment to a 2001 request, requesting approval of the use of another landfill in Michigan.
Department of the Air Force	June 23, 2004	October 25, 2005	US Ecology Idaho RCRA facility	Four M 47 tanks, less than 0.05% uranium average concentration	
Merck Research Laboratories	February 23, 2004	June 13, 2005	Landfill in New York State	80 cubic yards of soil containing 756 microcuries of tritium (16.7 pCi/gram)	
Michigan State University	February 28, 2002	June 12, 2002	Landfill	Incinerator ash	
Core Laboratories	August 31, 2001	November 4, 2003	Class II disposal wells (from oil and gas production)	Well-logging "sandouts" (well returns) with less than 1000 pCi/g total radioactivity concentration, and 120 day half-life.	

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Licensee	Date Submitted	Date Approved	Disposal Method	Materials Involved	Comments
Lionville Laboratory	May 17, 2001	October 4, 2001	Landfill	11e.(1) byproduct materials at and below Appendix B, Part 20, Table II, Col. 2, concentrations	
Big Rock Point Nuclear Power Plant	May 14, 2001	February 5, 2002	Landfill	Approximately 350,000 cubic feet of demolition debris. Cs-137 = 0.17 pCi/g Co-60 = 0.83 pCi/g H-3 = 7.86 pCi/g	
Oyster Creek	December 29, 2000	December 14, 2001	Offsite disposal on property owned by licensee next to plant site.	Approximately 5 million cubic feet. 0.088 pCi/g of Co-60, and 0.270 pCi/g of Cs-137.	
University of Michigan	September 27, 2000	March 23, 2001	Landfill	Incinerator ash	
Vermont Yankee	September 11, 2000	June 26, 2001	Onsite disposal	Adds slightly contaminated soil from construction-related activities to list of previously approved materials for onsite disposal [up to 980 cubic feet per year]	

## RESOURCES FOR OPTIONS PRESENTED IN COMMISSION PAPER

Assumptions: The U.S. Nuclear Regulatory Commission (NRC) receives six 10 CFR 20.2002 requests each year. One is unique, or has other attributes that require additional measures (such as holding a public meeting). Two are from nuclear power reactor licensees.

Option No.	Develop generic information (communication tools plus NRC public web site).	Maintain web page with "real-time" information on pending 10 CFR 20.2002 requests.	Issue <i>Federal Register</i> Notice and hold public meetings when necessary (included in Communication Plan	Amend reactor licenses (rather than issue letter approval).	Use defined, systematic coordination with disposal facility operator and State	Initial Resources, Full-Time Equivalent (FTE)	Annual Resources, FTE	Additional time to process 10 CFR 20.2002 request
Option 1 (current practice)	No	No	Sometimes	No	No	0	0	0
Option 2	Yes	No	Yes, when criteria are met. (Assumed one request per year)	No	Yes	0.33	0.20	Usually none. For certain requests when a public meeting is needed, 4-6 weeks (one per year estimated)

Option 3	Yes	Yes	Yes, when criteria are met. (Assumed one request per year)	Yes	Yes	0.63	0.41 minimum (would be more if reactor hearing were necessary)	Usually none, For significant requests (one per year estimated), would add 4-6 weeks for public meeting. If a reactor hearing were necessary, time to process request could be significantly longer, depending upon the case.
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**SPECIFIC ACTIVITIES AND ASSOCIATED RESOURCES TO INCREASE 10 CFR 20.2002 TRANSPARENCY**

Activity	Initial Resources <sup>1</sup>	Resources/Request	Additional Review Time, Weeks	Comments
1. Develop <i>generic</i> 10 CFR 20.2002 information (includes standard agency communication tools, such as a generic communications plan, and fact sheets, plus new information on NRC's public web page for waste disposal).	0.3 FTE	0	0	Included in both Options 2 and 3. Annual resources are to maintain and update generic information periodically.
2. Issue <i>Federal Register</i> Notice and develop and implement Communication Plan for a specific request, including public meetings, where necessary.	0	0.15	4-6	Options 2 and 3 contain this activity, and assume one significant 10 CFR 20.2002 request each year that requires this activity to be implemented. <i>Federal Register</i> notice would be issued at time of receipt of request.
3. Update public web site with "real-time" information on <i>case-specific</i> pending 10 CFR 20.2002 requests.	0.3	0.01	0	Included in Option 3. This would include up-to-date information on 10 CFR 20.2002 requests that are undergoing staff review, including links to ADAMS documents.

Activity	Initial Resources <sup>1</sup>	Resources/Request	Additional Review Time, Weeks	Comments
4. Amend reactor licenses (rather than using letter approvals, the current practice).	0	0.1 (but could be many more FTE for a reactor hearing)	4 weeks normally; much longer if a hearing is held.	Included in Option 3
5. Coordinate with disposal facility operator and State-permitting agency, where applicable.	0.03	0.01	0	Included in both Options 2 and 3. Would not apply to incinerator ash disposal, and other routine 10 CFR 20.2002 authorizations.

1. Resources required to develop background information and procedures. The resources are independent of the number of requests received and are used one time.

## AGENCY COMMUNICATION TOOLS

### Communications Plans:

Communications plans are used to deliver a consistent and accurate message about a project, issue, or event to all stakeholders in a timely fashion. They describe key messages, timelines, and methods for communicating a project or event with the U.S. Nuclear Regulatory Commission's (NRC's) stakeholders. Using existing guidance on communications plans, staff would develop a generic plan for 10 CFR 20.2002 authorizations, explaining, for example,

- Why 10 CFR 20.2002's authorizations are needed.
- The history of 10 CFR 20.2002 in NRC regulations.
- How safety is assured when NRC reviews a 10 CFR 20.2002 request.
- How any potential environmental impacts are evaluated.
- What materials are typically disposed of under 10 CFR 20.2002 and their relative hazard.
- How 10 CFR 20.2002 disposals are similar or dissimilar to other types of radioactive wastes and their disposal (e.g., Technically Enhanced Naturally Occurring Radioactive Material and higher activity low-level waste).
- How to get additional information from NRC.

Communications plans might also be developed to address specific 10 CFR 20.2002 requests that meet pre-defined criteria that call for extra outreach measures. These plans would focus on the specifics of the request – (a) the stakeholders directly affected; (b) the facility proposed for the disposal; (c) the concentrations and amounts of material proposed for disposal; and (d) the resulting doses, etc.

### Backgrounder:

A "backgrounder" is a summary that outlines NRC responsibilities and activities related to a broad topic of interest that has been or will be in the news for an extended period of time. It can be used by the public and internal stakeholders to obtain information on a topic of interest. Backgrounders are posted on the public web site. NRC's public web site currently has a backgrounder on "radioactive waste," and this document would be updated to include information on 10 CFR 20.2002 disposal authorizations.

### Fact Sheet:

A fact sheet is a concise, one-page description of the current status of a relatively specific activity, and is available to the public on the NRC web site. It is to be used to highlight an important milestone, goal, or product, or used to respond to, or clarify, misleading information from other sources. For 10 CFR 20.2002 authorizations, a fact sheet would be prepared when there is a specific approval that meets certain defined criteria. Most 10 CFR 20.2002 requests would not be expected to have fact sheets.