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Consideration on Environmental Impacts on Temporary Storage of Spent Fuel After Cessation of Reactor Operation

**Comment On:** NRC-2012-0246-0001

Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation

**Document:** NRC-2012-0246-DRAFT-0494

Comment on FR Doc # 2012-26295

150

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**Government Agency Type:** State

**Government Agency:** State of Nevada Agency for Nuclear Projects

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## General Comment

See attached file(s)

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## Attachments

NV Comments\_Waste\_Confidence\_EIS\_Scoping\_Final - Signed

SUNSI Review Complete  
Template = ADM - 013  
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Add= S. Lopas (SLL2)

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January 2, 2013

Cindy Bladey, Chief  
Rules, Announcements, and Directives Branch (RADB)  
Office of Administration  
Mailstop TWB-05-B01M  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Re: Comments on the Notice of Intent to Prepare an Environmental Impact Statement and Notice of Public Meetings, Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 10 CFR Part 51 [NRC-2012-0246], RIN 3150-AJ20**

The State of Nevada Agency for Nuclear Projects submits the attached comments in response to the request for comments published in the Federal Register, Vol. 77, No. 207 (October 25, 2012), 65137-65139.

Thank you the opportunity to comment on this matter.

Respectfully,

A handwritten signature in black ink, appearing to read "Robert J. Halstead".

Robert J. Halstead  
Executive Director

RH/sja

cc Marta Adams, Chief Deputy Attorney General  
Affected Units of Local Government and Tribes  
Western Interstate Energy Board HLW Committee

**State of Nevada  
Agency for Nuclear Projects  
Comments  
On  
U.S. Nuclear Regulatory Commission  
Request for Comments  
Notice of Intent to Prepare an Environmental Impact Statement and  
Notice of Public Meetings  
Consideration of Environmental Impacts of Temporary Storage of Spent Fuel  
After Cessation of Reactor Operation  
10 CFR Part 51  
[NRC-2012-0246]  
RIN 3150-AJ20**

**January 2, 2013**

## **GENERAL COMMENTS**

### **EIS and Rule Schedule**

The two-year schedule for completion of a waste confidence Environmental Impact Statement (EIS) and a new waste confidence rule, with release of the draft EIS for public review and comment scheduled for September 2013, provides insufficient time for the NRC Staff to develop a credible technical basis for the EIS and rule. For example, research is needed to support a scientifically valid assessment of the impacts of long-term storage and future handling and transport of high-burn-up fuel. The industry trend is for increased enrichment and burn-up of light water reactor (LWR) fuel and virtually no data exist regarding its response to long-term storage. As of 2010, it appears that about 26% of spent nuclear fuel (SNF) in storage in the US has burn-up greater than 40,000 MWd/MTU (presentation by AREVA Federal Services to SC Governor's Advisory Council, December 2012), and this percentage will surely grow through time. It is imperative that there be data on this critical factor to support any EIS analysis of the impacts of long-term storage, as well as future handling and transport of SNF. Assumptions about environmental impacts of long-term storage of SNF are insufficient when data supporting the characteristics of the aging radiological source term do not exist.

### **Source of Comments**

Because of the lack of specificity of the proposed action in the notice for scoping, many of the comments below are drawn from Nevada's comments on documents related to NRC's previous initiation of work on an EIS for long-term storage of discharged reactor fuel, particularly our February 17, 2012 comments in response to the NRC Draft Report for Comment, Background

and Preliminary Assumptions for an Environmental Impact Statement – Long-Term Waste Confidence Update, December 2011.

## **SCOPE OF THE EIS AND SIGNIFICANT ISSUES TO BE ANALYZED IN DEPTH**

### **Use of the DOE Yucca Mountain FEIS No-Action Alternative**

In its September 6, 2012 *Staff Requirements – COMSECY-12-0016 – Approach For Addressing Policy Issues Resulting from Court Decision To Vacate Waste Confidence Decision And Rule* (<http://pbadupws.nrc.gov/docs/ML1225/ML12250A032.pdf>), the Commissioners of the NRC stated: “The staff, as appropriate, may adopt or incorporate by reference all or part of another agency’s EIS. For example, the Department of Energy’s (DOE) “no action alternative” in the Yucca Mountain EIS, which the agency adopted in 2008 as part of its review of DOE’s license application, contains a foundation that the NRC should build upon.”

### **Reliance On The Yucca Mountain FEIS No-Action Alternative Is Unjustifiable**

The US Department of Energy, *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, DOE/EIS-0250F* (Washington, DC: DOE, February 2002) cannot be relied upon for analysis of the impacts of long-term storage of commercial spent nuclear fuel in the event no disposal facility is available in the foreseeable future.

### **Scenarios are neither appropriate nor reasonable**

The Yucca Mountain Final Environmental Impact Statement (FEIS) considers two scenarios for the No-Action Alternative: Scenario 1 - long-term storage of spent nuclear fuel and high-level radioactive waste at current sites with effective institutional control for at least 10,000 years; and Scenario 2 - long-term storage with no effective institutional control after about 100 years. DOE’s rationale for selecting these two scenarios is as follows: "Although the Department agrees that neither of these scenarios is likely, it selected them for analysis because they provide a basis for comparison to the impacts of the Proposed Action and because they reflect a range of the impacts that could occur." [FEIS at 7-1]

Despite its stated rationale, DOE selected two No-Action Alternative scenarios that never would occur, which is a clear violation of 10 C.F.R. § 63.31(c), the National Environmental Policy Act, 42 U.S.C. § 4332, and implementing CEQ regulations at 40 C.F.R. § 1502.14(a), which call for analysis of appropriate and reasonable alternatives.

There is no regulatory or policy precedent for the No-Action Alternative scenarios adopted in the DOE Yucca Mountain FEIS. Scenario 1 would require an impossible commitment of at least 10,000 years of institutional controls and consistent serial expenditures of funds for human activities, including construction and monitoring – a commitment that exceeds credibility. For

Scenario 2, storage is not inconceivable for the first one hundred years, with proper oversight and financial commitment. Following the first 100 years of institutional controls, however, it is inconceivable that society would accept the willful decision to cease maintenance and permit the eventual facility degradation that would result in uncontrolled massive releases of radionuclides to the environment.

Although the NRC adopted the DOE Yucca Mountain FEIS pursuant to Section 114(f)(4) of the Nuclear Waste Policy Act, there are numerous contentions challenging its sufficiency on topics including the No-Action Alternative that have yet to be adjudicated in the currently suspended licensing proceeding.

### **Primary Assumptions are Inappropriate for the Waste Confidence EIS Analysis of Impacts of Storage**

#### **Storage containers**

The Yucca Mountain FEIS No-Action Alternative assumes all commercial SNF would be stored dry at existing sites in horizontal concrete storage modules on a concrete pad at the ground surface, adding that the concrete storage module would provide protection from damage resulting from accidents such as aircraft crashes and from natural hazard phenomena such as earthquakes and tornadoes [Page 7-18]. For long-term storage, the level of protection would diminish through time, requiring monitoring and maintenance. Dry storage canisters inside the concrete module would contain 24 pressurized-water or 52 boiling-water reactor fuel assemblies.

The NRC waste confidence EIS scope should include in its analyses the spectrum of storage container designs, both horizontal and vertical, and fuel assembly capacities that are now in use, as well as take into account industry trends in this technology, including newly introduced below-grade storage modules. For long-term impact analysis, each likely will have differing degradation, failure, and other changes in protective characteristics, depending on prevailing environmental conditions at the site.

#### **SNF characteristics**

The Yucca Mountain FEIS No-Action Alternative analysis did not include updated information and trends in fuel enrichments and burn-up, existing and projected, for commercial nuclear power reactors [Page 7-10]. There have been, and probably will be, additional significant increases in these parameters that will figure in SNF storage impacts, both short and long-term. This changing factor must be considered in the NRC waste confidence EIS scope as it is fundamental to the source term in all radiological impact analyses expected to be performed.

#### **Changes in externalities**

The Yucca Mountain FEIS No-Action Alternative analysis for long term storage did not attempt to quantify the variability of estimated impacts related to possible changes in climate, societal values, technology, or future lifestyles. "To simplify the analysis, DOE did not attempt to quantify these uncertainties even though uncertainties with these changes could undoubtedly

affect the total consequences reported in Table 7-7 by several orders of magnitude.”[Page 7-41] Table 7-7 quantifies long-term collective drinking water radiological impacts under Scenario 2. It is expected that the scope of the NRC waste confidence EIS will include analyses that examine possible future states that were ignored in the Yucca Mountain FEIS No-Action Alternative impact analyses.

### **Time Span for Evaluation of Spent Fuel Storage Systems**

In the NRC Draft Report for Comment, Background and Preliminary Assumptions for an Environmental Impact Statement – Long-Term Waste Confidence Update December 2011, NRC staff planned to develop the Waste Confidence EIS “to analyze impacts of storage from approximately the middle of this century for a period of 200 years. . . .the oldest spent fuel will have been stored for about 100 years by the middle of the century. The staff selected a 200-year span for the EIS because that is approximately when this oldest fuel will approach 300 years in storage. The 300-year period is the timeframe being used by NRC and others in technical analyses to identify spent fuel aging issues.” [p.6]

Nevada supported the NRC staff position in the previous draft report, and we continue to support the staff decision to adopt a 200-year span for the Waste Confidence EIS, and the use of a 300-year timeframe for analyses of spent fuel aging issues. The 200-year span for the Waste Confidence EIS is an appropriate bounding period, considering the current programmatic and policy situation. The 300-year period is an appropriate bounding timeframe for technical analyses of stored spent fuel aging issues.

However, we suggest that the Waste Confidence EIS also evaluate the radiological and thermal characteristics of spent fuel after 50 years and 100 years of storage. Due to decay of shorter-lived fission products, especially Cs-137 and Sr-90, the thermal output and surface dose rate of spent fuel declines significantly between 50 and 100 years of storage. These are particularly important characteristics of spent fuel for the planning and design of the storage and transportation system. Table 1, from the 1980 Waste Confidence proceeding, illustrates this trend for moderate burn-up fuel, typical of assemblies discharged from U.S. pressurized water reactors (PWRs) during the 1980s.

As noted earlier in these comments, the annual average burn-up of discharged fuel has steadily increased over past three decades. The EIS should provide data for both moderate and high-burn-up fuel (greater than 50,000 MWDt/MTU for PWR and greater than 40,000 MWDt/MTU for BWR), showing thermal and radiological characteristics for representative assemblies after 50, 100, 200, and 300 years of storage.

While Nevada does support a 200-year time span for the Waste Confidence EIS, there is ample reason to believe that technology development will determine the actual time frame for any spent fuel storage site, whether regional or centralized or at reactor. One has only to review the technological advances made in the last 100 years to believe that new advances in the next 50-100 years will play a major role in determining the manner in which spent fuel and high-level waste will be managed. Indeed, the history of geologic disposal as a concept is less than 60 years old, dating from the Princeton Conference in 1955 and the resulting publication by the National

Academy of Sciences of The Disposal of Radioactive Waste on Land in 1957. The commercialization of dry storage technology is barely 30 years old. The EIS should make the point that, even though the time frame for this EIS is 200 years, there are strong reasons to believe that new management solutions will evolve before then, and that any interim storage facility (whether centralized, regional, or at-reactor) will not likely become a de facto repository.

Table 1. Thermal and Radiation Characteristics of A Spent Fuel Assembly  
(After 33,000 MWDt/MTU burn-up)

Age (yr)	Thermal Power (Watts/assembly)	Activity (curies/assembly)	Surface Dose Rate (rem/hr)
1	4,800	$2.5 \times 10^6$	234,000
5	930	$6.0 \times 10^5$	46,800
10	550	$4.0 \times 10^5$	23,400
50	250	$1.0 \times 10^5$	8,640
100	130	$5.0 \times 10^4$	2,150
500	45	$2.5 \times 10^3$	58
1,000	26	$1.7 \times 10^3$	9.6
5,000	15	$6.0 \times 10^2$	2.5
10,000	6.4	$4.5 \times 10^2$	1.8

Source: DOE-NRC, In the Matter of Proposed Rulemaking on the Storage and Disposal of Nuclear Waste (Waste Confidence Rulemaking) PR-50, 51 (44FR61372) Statement of Position of the United States Department of Energy, DOE/NE-0007 (April 15, 1980) Table II-4, p. II-56.

## Implications of Extended Storage for Geologic Disposal

The Waste Confidence EIS need not assess the impacts of a disposal facility. However, we strongly believe that this EIS must broadly and fully assess the impacts of extended storage of spent fuel on any future geologic disposal facility and the associated transportation system.

The EIS should discuss the advantages and disadvantages of an integrated waste management strategy, based on extended storage, for the design and operation of a geologic repository, relative to transportation, surface facilities, waste package design, thermal loading, and long-term performance. Under any alternative scenarios evaluated in the EIS, the same analyses should be performed for a system including one or more interim storage facilities, and/or a reprocessing facility.

The EIS should specifically address the following issues:

- a. What would be the advantages and disadvantages of extended storage (from 50 years to 300 years) on the design of a repository? How might this affect the selection of a site for a geologic repository?

- b. What would be the advantages and disadvantages of extended storage on the design of a repository waste package, considering a variety of dual purpose canister designs?
- c. What would be the advantages and disadvantages of extended storage on worker exposures at the reactor sites, storage facility sites, and at a repository site?
- d. What would be the advantages and disadvantages of extended storage on the transportation of spent fuel to and from an interim storage site, to and from a repository, and regarding design of the transportation packages?
- e. What would be the advantages and disadvantages of extended storage on public exposures from the transportation, storage, and disposal of such spent fuel?

### **Human Error and Human Factors Management**

The Waste Confidence EIS should fully discuss and evaluate the effect of human factors with respect to system and component design, fabrication, operations, and response to incidents and accidents. Human error should be considered as a safety factor in routine operations, as well as a causal factor or exacerbating factor in accidents. Considering the extended time period being evaluated for dry storage of spent fuel in welded canisters without repackaging, it is especially important to assess the potential implications of human errors in canister loading and closure; assess the need for NRC inspection of canister loading operations at reactors; and assess the need for long-term monitoring of canister performance in dry storage.

### **Use of “Generic sites” and “Composite sites” for Impact Assessment**

The December 2011 NRC Draft Report for Comment proposed that the Waste Confidence EIS use “generic sites” and “composite sites” to estimate impacts of extended storage installations and associated transportation. “A single generic, composite site may be based on information about several actual sites: a generic, composite site on a seacoast may be derived from information about two or three actual coastal sites and, possibly, other sites.” [p.7]

This approach is problematic in two respects: the impact assessment would not be legally sufficient for NEPA purposes, and the findings would have little or no value to affected stakeholders in any future use of the EIS. From the standpoint of stakeholder acceptance, evaluating “composite generic sites” based on actual sites is a recipe for disaster. Members of the public will be looking for any indication that “their” area is under consideration without any notification or expression of interest. The statement on page 14 that the “staff will also consider analyzing impacts from one or more actual sites for comparison...” only exacerbates this perception.

Relative to consolidated or centralized storage facilities, this methodology would totally negate the “consent-based” approach recommended in the Final Report of the Blue Ribbon Commission on America’s Nuclear Future. As an alternative approach, this EIS should evaluate the basic attributes of a generic facility and identify favorable and unfavorable siting conditions for each

type of facility on a generic basis. Any detailed evaluation of site-specific impacts should be left for the required site-specific NEPA documents at a future time.

## **Transportation**

**The Waste Confidence EIS should consider the extensive recommendations regarding spent fuel transportation in the Blue Ribbon Commission (BRC) on America's Nuclear Future Final Report issued in January 2012.**

The BRC Final Report contains a new chapter, [Pp.81-87] written after the release of the December 2011 NRC Staff Draft Report, which contains major new recommendations regarding transportation safety, security, and logistics, and specifically endorses the risk management measures recommended by the National Academies in their 2006 report, Going the Distance?: The Safe Transport of Spent Nuclear Fuel and High-level Radioactive Waste in the United States.

Both the Blue Ribbon Commission and the National Academies urged the NRC to proceed with its previous plans for full-scale physical testing of spent fuel shipping casks. Full-scale cask testing is not a requirement for NRC certification. Of the currently licensed shipping casks, none have been tested full-scale. In place of full-scale testing, the NRC relies on scale model testing and computer simulation. The possibility of storage for 200 years or more prior to off-site transportation and the possibility of multiple shipments between reactors, storage facilities, reprocessing facilities and repositories, underscore the need for full-scale physical testing of shipping containers.

**The EIS should consider the full range of spent fuel transportation impacts addressed in the NRC licensing proceeding for Yucca Mountain and the associated NEPA documents.**

The December 2011 Draft Report for Comment states that NRC staff “will use, where appropriate, aspects of transportation impact analyses contained in other recent NEPA documents.” [p.10] The Draft Report further states the EIS “will consider transportation accidents previously analyzed in the context of radiation exposure,”[p.12] and “the analysis will seek to provide quantitative information” on “potential impacts of transportation, such as costs and radiation exposure.”[p.16]

The Waste Confidence EIS should evaluate the full range of radiological and non-radiological transportation impacts likely to be addressed in any future NRC licensing proceeding for interim storage or geologic disposal facilities. The scoping of transportation impacts should be guided by the decision of the NRC Atomic and Safety Licensing Boards (ASLBs) in the Yucca Mountain licensing proceeding:

... there can be “no serious dispute” that the NRC’s environmental analysis in connection with licensing nuclear facilities should extend to “related offsite construction projects – such as connecting roads and railroad spurs.” Likewise, there can be no serious dispute that the NRC’s NEPA responsibilities do not end at the boundaries of the proposed repository, but rather extend to the transportation of nuclear waste to the repository. The

two are closely interdependent. Without the repository, waste would not be transported to Yucca Mountain. Without transportation of waste to it, construction of the repository would be irrational. Under NEPA, both must be considered.<sup>1</sup>

Based on this determination, the ASLBs admitted 46 NEPA transportation or transportation-related contentions addressing virtually every aspect of repository transportation, including construction and operation of rail access to the proposed repository site.

The EIS for the Long-Term Storage Waste Confidence Update should evaluate the same radiological transportation impacts considered in the Yucca Mountain licensing process. NRC staff reviewed and adopted the DOE Supplemental Environmental Impact Statement (SEIS), including the transportation impact calculations for the mostly rail transportation scenario.<sup>2</sup> The SEIS evaluated transportation radiological impacts in four categories: (1) “incident-free” exposures to members of the public residing near transportation routes, cumulative total up to 2,500 person-rem dose and 1.5 latent cancer fatalities, and in certain special circumstances (for example, 0.016 rem to a person in a traffic jam) [Pp.6-20, 6-21, 8-41]; (2) “incident-free” exposures to transportation workers such as escorts, truck drivers, and inspectors, cumulative total up to 13,000 person-rem and 7.6 latent cancer fatalities (by administrative controls, DOE would limit individual doses to 0.5 rem per year; the allowable occupational dose is 5 rem per year) [Pp.6-21, 8-41]; (3) release of radioactive material as a result of the maximum reasonably foreseeable transportation accident (probability of about 5 in one million per year), involving a fully engulfing fire, 34 rem dose to the maximally exposed individual, 16,000 person-rem population dose and 9.4 latent cancer fatalities in an urban area, and cleanup-costs of \$300,000 to \$10 billion [Pp.6-15, 6-24, G-56]; and (4) release of radioactive material following a successful act of sabotage or terrorism, using a high-energy density device, resulting in 27-43 rem dose to the maximally exposed individual, 32,000-47,000 person-rem population dose and 19-28 latent cancer fatalities in an urban area, and cleanup costs similar to a severe transportation accident. [Pp.6-27, CR-467]

**The Waste Confidence EIS should specify its assumptions about NRC regulation of spent fuel shipments to interim storage and geologic disposal facilities.**

Under current Federal law, shipments of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to facilities constructed under the Nuclear Waste Policy Act (NWPA) as amended would not be regulated by NRC, except for use of NRC-certified casks and shipment notification to states, as specifically required by the NWPA. Former NRC Chairman Richard Meserve explained: “If DOE takes custody of the spent fuel at the licensee’s site, DOE regulations would control the actual spent fuel shipment. Under such circumstances, the NRC’s primary role in transportation of spent fuel to a repository would be certification of the packages used for transport. ... However, if NRC licensees are responsible for shipping the spent fuel not only must the transport container be certified by the NRC, but also the shipment must comply with

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<sup>1</sup> NRC, Atomic Safety and Licensing Boards, Memorandum and Order Identifying Participants and Admitted Contentions, Docket N0. 63-001-HLW (May 11, 2009).

<sup>2</sup> NRC, U.S. Nuclear Regulatory Commission Staff’s Adoption Determination Report for the U.S. Department of Energy’s Environmental Impact Statements for the Proposed Geologic Repository at Yucca Mountain, Pp. 3-13, 3-15, 5-1 (September 5, 2008).

NRC regulations for the physical security of spent fuel in transit (10 CFR Part 73). NRC licensees are subject to inspection for compliance with the NRC's transportation safety and security regulations. The NRC also issues Quality Assurance (QA) program approvals for radioactive material packages that apply to the design, fabrication, use and maintenance of these packages. Activities conducted under an NRC QA program are also subject to NRC inspection."<sup>3</sup>

The BRC Final Report made the following recommendation in this regard: "...the BRC's Transportation and Storage Subcommittee heard testimony that DOE's plans to use its own self-regulating authorities under the Atomic Energy Act sharply undercut credibility in the proposed transportation program. The existing regulatory framework for commercial transportation – which features extensive oversight and involvement by the NRC, mode-specific administrations of the DOT, and state and tribal officials – is proven. Consistent with the recommendations articulated in Chapter 7 of this report, the Commission believes that a new waste management organization should be subject to independent regulation of its transport operations in the same way that any private enterprise performing similar functions would be – in other words, the new organization should not receive any special regulatory treatment. This would help assure regulatory clarity and transparency." [p.83]

**The Waste Confidence EIS should consider future developments in the transportation environment which could affect the safety and security of spent fuel shipments.**

The NRC Draft Report for comments states that the Waste Confidence EIS "will not speculate about changes in the national transportation infrastructure or transportation modes that may occur decades or centuries from now." [p.10] The extended period of the EIS must consider likely changes to the freight transportation environment. Movements of spent nuclear fuel by mid-century will occur in an environment that is much different than today. The average speed of freight rail has changed little since the 19th century. Railroads recognize that the greatest opportunity for improved service lies in increased speeds. Over the course of the next century, average freight rail speeds will increase, with fewer and shorter stops. Additionally, railroads are working to enhance their intermodal connectivity. This is particularly important given the growing number of nuclear power plants not currently serviced by freight rail. Technological changes will also reduce train crew requirements and will result in increased use of remote-controlled trains. The coming years will see increased use of these trains for cross-country shipments in addition to their current widespread use in rail yards. The EIS should consider the changes to the accident environment posed by faster shipments, as well as the possibility of a large increase in smaller intermodal shipments.

**Terrorism and Sabotage**

The December 2011 NRC Draft Report for Comment states that NRC staff "plans to consider the environmental impacts of terrorism related to storage and transportation at a generic level." [p.13] Nevada generally agrees with the generic study approach suggested and use of the information resources identified, including recent and ongoing NRC rulemaking activities regarding 10 CFR Part 73. Given the long timeframe covered by the EIS, provisions should be

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<sup>3</sup> R.A. MESERVE, RESPONSES TO QUESTIONS FROM SENATOR DURBIN (Letter dated March 22, 2002) NRC-Durbin-ML021060662.pdf (May 10, 2002).

made for periodic updating of the terrorism and sabotage analyses to address: (1) advances in the technology of terrorism and counter-terrorism; (2) changes in population density near storage facilities and shipment routes; and (3) changes in understanding and definition of the design basis events and design basis threats.

## **Monitoring of Dry Storage Systems**

The Waste Confidence EIS should address active monitoring of dry storage systems. NRC staff identified a number of issues related to monitoring in a Draft Report for Comment, "Identification and Prioritization of the Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel," published May 2012. Nevada agrees with the NRC staff focus in that draft report upon monitoring as a "tool for ensuring continued safety" of spent fuel storage, [p. 5-4] and the observation that monitoring methods that can "detect early signs of degradation before a safety function is severely compromised are of greater value than those that only indicate gross failure." [p. A9-2]

The Waste Confidence EIS should include an evaluation of methods of inspection and monitoring both for canister internal conditions and for dry storage system external structures and support pads. Additionally, the Waste Confidence EIS should consider the implications of monitoring to ensure continued safety in relation to public acceptance of extended storage at reactor sites and at consolidated storage facilities. The EIS should specifically evaluate the availability and reliability of systems for continuous monitoring of canister internal conditions and external structures and consider the potential costs and benefits of combining continuous monitoring, periodic inspections, and nondestructive evaluations.

## **Cooperating Agencies**

The Waste Confidence EIS should discuss potential cooperating agency status for other Federal agencies, including but not limited to, the U.S. Environmental Protection Agency.

## **Potential Locations for Public Meetings on the Draft EIS**

Considering the national and regional significance of the Waste Confidence EIS, and the potential implications for reactor host communities and transportation corridor states, the NRC should consider holding public meetings on the draft document in the following cities:

Atlanta, GA  
Boston, MA  
Chicago, IL  
Denver, CO  
Los Angeles, CA  
Omaha, NE  
Philadelphia, PA  
Phoenix, AZ;  
Portland, OR  
St. Louis, MO