Potential Implications re Revisions to 10 CFR Part 61
Initial Comments from Compacts and Host States

During the fall 2010 meeting of the Low-Level Radioactive Waste Forum, the U.S. Nuclear Regulatory Commission gave a presentation on potential revisions to 10 CFR Part 61.

Shortly thereafter, the LLW Forum asked each compact and host state to provide a brief overview of the potential impacts of such changes to their individual laws and regulations. Specifically, we asked each compact and host state to review if Part 61 is referenced in compact law or state regulatory structure and, if so, to identify where. We also requested that they identify any problematic issues that may arise in their individual state or compact region from potential revisions to Part 61.

Below are the unedited responses that we received to date. Please note that these responses were written prior to the release of SECY-10-0165 and therefore do not include any comment on the staff’s approach to initiate activities related to a risk-informed, performance-based comprehensive revision to Part 61. Instead, the comments are intended as background information only as NRC explores options for moving forward.

The LLW Forum, as well as individual compacts and states, may submit additional information as NRC continues the process of analyzing potential revisions to Part 61.

Appalachian Compact and Pennsylvania:

- Part 61 is not referenced in the Compact act (Act 1985-120), PA Low-Level Radioactive Waste Disposal Act (Act 1988-12) and PA Low-Level Radioactive Waste Management and Disposal Regulations (Title 25, Chapter 236).

- PA is an NRC Agreement State and has adopted the NRC regulations by reference, including 10 CFR Part 61.

- PA regulations in Chapter 236 are more stringent than the NRC Part 61 regulations as it relates to the disposal facility design (above-grade disposal vs. shallow land burial).
The specific sections of the PA regulations that could “potentially” be affected by Part 61 revisions include, but are not limited to:

**Disposal Site Performance Objectives and Design Requirements for the Disposal Facility:** Pertaining to protection of general population, inadvertent intruder, and radiation workers; stability of disposal site; and long-term stability of disposal units.

**Waste Classification System:** Pertaining to determination of the classification of waste; classification by long-lived radionuclides (Part 61, Table 1) and short-lived radionuclides (Part 61, Table 2).

**Waste Characteristics:** Pertaining to minimum requirements for classes of waste to facilitate handling of waste and to protect the health and safety of the site personnel.

**Environmental Monitoring:** Pertaining to environmental monitoring of the disposal facility (pre-operation, operation and post-operation).

**Financial Assurance:** Pertaining to the applicant’s ability to cover the costs of conducting all licensed activities over the life of the project, including the costs of construction and disposal.

The potential impact of revisions to Part 61 regulations on PA and the Appalachian Compact is difficult to assess at this time, since the nature of the changes are unknown and there are no regional disposal facility in the Appalachian Compact. However, if there are any revisions to Part 61, PA would have to adopt those revisions to ensure compatibility with the NRC regulations.

In that the development of 10 CFR 61 involved a risk-based approach, NRC should clearly define what additional health and safety benefits would result from risk informing Part 61 further (other than limited rulemaking for unique waste streams). This is important because the facilities that are currently licensed under Part 61 or its equivalent Agreement State regulations (Barnwell in SC, Richland in WA, EnergySolutions in UT and Waste Control Specialists in TX) have implemented additional measures, such as the use of engineered barriers, to supplement the natural features of the disposal site.

We recommend that any revisions to the current LLRW disposal regulations include stakeholder input, particularly since many states and compacts have adopted the NRC regulations in 10 CFR Part 61. We also support the view of the NRC Advisory Committee on Nuclear Waste that the improvements in risk-informing LLRW regulations should be accomplished through licensing actions and regulatory guidance where possible.
Atlantic Compact:

No reference to Part 61 in Compact Law. Also DHEC is aware of NRC activities pertaining to Part 61 thru. OAS and CRCPD fORUMS. They are waiting to see what is proposed since this is a multi year effort.

Central Compact:

Part 61 is not referenced in our Compact. The definition of llrw is in our Compact as follows:

Article II. Definitions, “g. ‘low-level radioactive waste’ or ‘waste’ means, as defined in the Low-Level Radioactive Waste Policy Act (Public Law 96-573), radioactive waste not classified as: High-level radioactive waste, transuranic waste, spent nuclear fuel, or by-product material as defined in section 11 e.(2) of the Atomic Energy Act of 1954, as amended through 1978.

The Commission has no siting activities going on and currently they have no Host State.

Midwest Compact:

Indianna:

I have looked at the enabling statute in Indiana (see http://www.in.gov/legislative/ic/code/title13/ar29/ch1.html) for our membership in the Midwest Low-Level Radioactive Waste Compact and found that it does reference 10 CFR Part 61.55 under IC13-29-1-2(m). The reference is relative to how that definition read on January 26, 1983. When the Midwest Compact was formed each member state had to adopt identical language into their statutes. If the Nuclear Regulatory Commission changes that definition it will be necessary for all of the Midwest Compact states to revise their statutes to recognize any changes or else we will continue to reference an outdated definition and create confusion over who is responsible for what.

Iowa:

It is hard to say what impact this may have on generators and the state without knowing any specifics. Our statute, Code of Iowa Chapter 457B, does reference 10 CFR 61 in the definition of low-level radioactive waste as follows:

457B.1, Article II, paragraph “m” – “Low-level radioactive waste” or “waste” means radioactive waste that is not classified as high-level radioactive waste and that is Class A, B, or C low-level radioactive waste as defined in 10 C.F.R. § 61.55, as that section existed on January 26, 1983.
So a change to a risk based system would impact the definition. In searching this I noticed that 10 CFR 61.55 has been amended twice since 1983. So it looks like our statute may need to be updated!

**Missouri:**

**Anticipated Impacts to State Statutes**

The Department, in coordination with the Department of Health and Senior Services, has reviewed Missouri statutes, and found only one reference to 10 CFR Part 61. This is in the definition of low-level waste in RSMo Chapter 260.700, under the statutes regarding the Midwest Interstate Low-Level Radioactive Waste Compact.

Changes to Part 61 will not impact the fee established for shipments of radioactive materials in RSMo 260.392. Any changes to Part 61 regarding depleted uranium will be of interest to the Department, as we are unsure how this material should be classified under RSMo 260.392.

Changes to Part 61 should not impact the Department’s regulation of naturally occurring radioactive material (NORM) disposed of in permitted landfills, as NORM waste does not fall under any classifications included in Part 61. NORM also falls within a regulatory grey area within the Environmental Protection Agency’s (EPA) federal requirements for disposal. Only the land application of low level drinking water residuals and mining waste tailings have been substantially addressed by EPA.

**NORM Waste – Potential Future Impacts**

The Department’s regulations regarding solid waste disposal (10 CSR 80-3.010(3)(1)2) exclude virtually all radiologic material except Department approved NORM wastes. The regulations do not, however, include a limit to radioactivity levels within the NORM nor do they establish a total activity level which may be accepted over the life of a facility. While NORM wastes such as piping scale and refractory brick contain low levels of activity, the new drinking water requirement to reduce the amount of radium allowed may be changing the waste stream in the near future. Several drinking water systems have installed treatment processes to filter out the radium. The concentrated filter cake will likely become an issue, as although it contains NORM, the activity level is concentrated greatly. Federal guidance on this issue might be helpful as a potential or suggested limit on radioactivity levels accepted for landfill disposal. Should proposed changes to 61.55 ban or establish a ceiling for disposal which is lower than NORM waste we currently allow, refractory brick and other NORM would face a considerable obstacle and increased cost for out of state disposal.

**Ohio:**

When Part 61 and the waste classification system was developed the NRC considered potential doses to an offsite member of the public and an advertent intruder based on
certain assumptions regarding the waste streams likely to be found in a commercial LLW disposal facility. At the time, early 1980's, they did not anticipate substantial amount of uranium, particularly DU, as part of the waste stream. Renewed interest in uranium enrichment facilities has raised the question of DU disposal.

Besides DU, NORM including Ra-226 waste was not considered as a major waste stream. They are also concerned about the blending of waste since it could lead in waste concentrations inconsistent with the current Part 61 requirements.

The proposed rulemaking intends to specify the following requirements for disposal of unique waste streams, including large quantities of depleted uranium:

1. Stipulate the need for Part 61 licensees to conduct a site-specific performance assessment for operating and proposed LLW disposal facilities for §61.41. The analyses would be used to identify if additional restrictions or a prohibition of disposal of unique waste streams at a specific site is necessary.

2. Stipulate the need for Part 61 licensees to conduct a stylized human intrusion analysis following the end of the period of active institutional controls for §61.42.

3. As necessary, provide additional changes that will reduce ambiguity and facilitate implementation (e.g., provide a period of performance, update the radiation safety standards to Total Effective Dose Equivalent (TEDE), provide a dose limit for §61.42, update §61.7.

Northwest Compact and Washington and Utah:

Northwest Compact:

The Northwest Compact statutes make no reference to 10 CFR Part 61.

Washington:

DOH does refer to Part 61 in our regulations 246-249 and 246-250. We also refer to it in the USE license. However, I do not see an impact to us in Washington at this time which would result from any revision to Part 61. The only thing I can see is a regulation change.

Utah:

We appreciate the opportunity to provide comments regarding the NRC's evaluation of Part 61 and offer the following general comments.
UTAH ANALOGUE TO PART 61

The source of Utah's current analogue to Part 61 (found in R313-25, License Requirements for Land Disposal of Radioactive Waste -- General Provisions, Utah Administrative Code) was Part M of the Suggested State Regulations for Control of Radiation, as prepared by the Conference of Radiation Control Program Directors. The requirements NRC has in 10 CFR 61.55 and 56 are found in R313-15-1008.

GENERAL COMMENTS

Using a classification scheme that is more risk-informed is a good approach and one we can encourage NRC to pursue.

The eventual impacts on Utah will be dependant on the compatibility levels assigned to the various subsections. For example, if NRC regulations concerning unique waste streams (including blended low-level waste) are set at compatibility level B, we may face significant issues in being more restrictive than the corresponding federal requirements. [Note: Texas and Utah commented before the NRC Commissioners in June 2010 during the meeting addressing waste blending for the need for Agreement States to have flexibility in this matter.]

The comments from other Agreement States to NRC (conference call of 11-18-2010) indicate that states are interested in the performance period timeline and the length of the institutional control period. During this call, NRC was asked if radium-226 will be added to a Table in 10 CFR 61. Utah would support that approach by NRC.

Rocky Mountain Compact:

The RM Compact makes no reference to 10 CFR 61 so a change to this regulation would not raise any issues regarding the governing statute. The RM Board Rules do reference 10 CFR 61 as in effect on January 26, 1983 so a change to this regulation could result in the Board considering a change to its rules.

Southeast Compact:

Part 61 is not referenced in our compact law. In the definitions section of our law, low-level radioactive waste is defined as follows:

“‘Low-level waste’ or ‘waste’ means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or by-product material as defined in Section 11e,(2) of the Atomic Energy Act of 1954, or as may be further defined by Federal law or regulation.”

There is no specific reference to Part 61 in our law.
As we are not actively siting a facility at this time, we cannot conceive of any direct impact to our regional activities.

However, I do have concerns for how this might impact the operation of the three existing disposal facilities and the one under development in Texas. While I recognize that amending the regulations would not decrease the safety at the facilities, the perception could develop nonetheless, either through confusion or deliberate fear mongering that:

(1) the old regulations are not adequately protecting public safety and so they must be amended, or
(2) that the new regulations will loosen safety requirements and thus not provide adequate protection.

Even the mere discussion of amending the regulations could create a perception in the state legislatures or among the public that public health and safety will not be protected, and this perception could lead to activities such as:

(1) legislative reviews that would delay or stop construction in Texas, and
(2) efforts to close existing facilities.

**Southwestern Compact:**

In your October 20, 2010 E-mail you asked if part 61 is referenced in our compact law or state regulatory structure and, if so where. You also asked for the Southwestern Commission to identify any problematic issues that may arise in our compact region from potential revisions to 10 C.F.R. Part 61. I am responding to your inquiry.

A. Compact Law

Regarding our Compact Law - Public Law 100-712, "Southwestern Low-Level Radioactive Waste Disposal Compact Consent Act" (Consent Act). there is no express reference to 10 C.F.R. Part 61 in this statute. There are however, seven implied references to 10C.F.R. Part 61 as follows.

1. Art. I(E) Each party state, if an agreement state...or the Nuclear Regulatory if not an agreement state is responsible for the primary regulation of radioactive materials within its jurisdiction.

2. Art. II Definitions -(C) "Disposal" means the permanent isolation of low-level radioactive waste pursuant to requirements established by the Nuclear Regulatory Commission and the Environmental Protection Agency under applicable laws, or by a part state if the state hosts a disposal facility.
3. Art. III(g)(1) The Commission shall do, pursuant to the authority granted by this compact, whatever is reasonably necessary to ensure that low-level radioactive wastes are safely disposed of and managed within the region.

4. Art III (g)(19)(b) The Commission and the host state assess the affected regional disposal facilities' capability to handle imported low-level radioactive wastes and any relevant environmental or economic factors, as defined by the host state's appropriate regulatory authorities.

5. Art. IV(E) A host state shall do all of the following:.(2) Ensure by law, consistent with any applicable federal laws, the protection and preservation of public health and safety in the siting, design, development, licensing, regulation, operation, closure, decommissioning, and long-term care of the regional disposal facilities within the state.

6. Art. IV (F)(4) Each party state shall maintain a registry of all generators within the state that may have low-level radioactive waste to be disposed of at a regional disposal facility, including, but not limited to, the amount of low-level radioactive waste and the class of low-level radioactive waste generated by each generator.

7. Art.V A regional disposal facility shall be approved by the host state in accordance with its laws. This compact does not confer any authority on the Commission regarding the siting, design, development, licensing, or other regulation, or the operation, closure, decommissioning, or long-term care of, any regional disposal facility within a party state.

HOST STATE REGULATORY STRUCTURE

Reference to 10CFR Part 61 was not found in California statutes. However, 10 CFR Part 61 is expressly referenced in California Code of Regulation. However, our analysis as to host states' regulatory structure is deferred to Host State's (California's) Analysis Response.

PROBLEMATIC ISSUES

None at this time. However, we reserve the right to comment as the Nuclear Regulatory Commission publishes draft 10 CFR Part 61 amendment language.

Texas Compact and Texas:

Texas Compact:

Your first question was whether Part 61 was referenced in Texas Compact law or the state regulatory structure and, if so, where.

There are no references to Part 61 in the Texas Compact law. There are some in the Texas laws setting up the State's regulatory structure.
Both the Texas regulatory structure and the Texas Compact are set out in the Texas Health and Safety Code. The Compact language is in Chapter 403; and the regulatory scheme in Chapter 401.

I have attached a Word file with copies of where specific references to Part 61 appear in Chapter 401, the law on the regulatory program. As you will see, there are only two sections of the Texas law making specific references to Part 61. However, there are a number of other sections that make indirect references.

For example, Section 401.001 sets out State policy to maintain a regulatory program in Texas that is compatible with federal standards are regulatory programs. Another section, and one that may give some problems with any revisions in C.F.R., is section 401.005. It says: “A reference in this chapter to the ‘C.F.R.’ or the ‘Code of Federal Regulations’ means the Code of Federal Regulations as it existed on September 1, 1999.” Therefore, if Part 61 is revised, the reference in our Statute will be out of date.

**Texas:**

There should be a clear explanation of what additional health and safety benefits would result from the effort to "risk-informing" 10 CRF Part 61. Policymakers in Texas have developed a regulatory approach for low-level radioactive waste disposal under its Agreement State program, implementing additional measures, legal and financial protections, and supplements to natural features to create a stronger base of regulations. This approach, lead by legislative policy-makers, included the input and cooperation of industry and public groups, as well as discussions of risk, to attain confidence in a regulatory approach that is uniquely Texas', and that has lead to the successful licensing of a Texas disposal facility. A possible unintended consequence of mandatory changes to regulations at this point in time would be the creation of confusion and an alteration of the common understanding of those who actively, in good faith, participated in the development of the Texas regulatory approach. Additionally, if there is a perception that new regulations are loosening and/or weakening the protective measures and safety requirements put into place in Texas, then confidence and acceptance could be profoundly impacted. The weakening of confidence could result in new efforts, additional reviews, or other challenges that could delay or stall the construction of the planned disposal facility.

From a disposal host states' perspective, an issue with changes to 10 CFR Part 61 is how states will be required to be compatible with any changes, i.e. whether they are optional or if they must be adopted for compatibility. Texas has policy and rules in place that were part of the regulatory landscape when policy decisions were made to move forward with a private hybrid Compact/Federal waste disposal site. An example of a rule that has been part of the regulatory landscape for decades in Texas is the dilution/blending rule. Additional rules on determination of peak dose and longer periods of analysis, while recognizing the role of uncertainties, have also been a part of Texas regulation. Forcing a change of those rules for federal consistency could have a disproportional impact on
states (and compact) that have made the tremendous effort to site facilities and those that have successfully open disposal facilities.
Sec. 401.004. LOW-LEVEL RADIOACTIVE WASTE DEFINED. (a) Except as provided by Subsection (b), "low-level radioactive waste" means radioactive material that:

(1) is discarded or unwanted and is not exempt by board rule adopted under Section 401.106;

(2) is waste, as that term is defined by 10 C.F.R. Section 61.2; and

(3) is subject to:

(A) concentration limits established under 10 C.F.R. Section 61.55, or compatible rules established by the department or commission, as applicable; and

(B) disposal criteria established under Title 10, Code of Federal Regulations, or established by the department or commission, as applicable.

Sec. 401.218. DISPOSAL OF CERTAIN WASTE. (a) In this section, "Class A low-level radioactive waste," "Class B low-level radioactive waste," and "Class C low-level radioactive waste" have the meanings assigned by commission rule.

(b) The compact waste disposal facility license holder shall dispose of Class B low-level radioactive waste and Class C low-level radioactive waste:

(1) within a reinforced concrete container and within a reinforced concrete barrier or within containment structures made of materials technologically equivalent or superior to reinforced concrete; and

(2) in such a manner that the waste can be monitored and retrieved.
(c) The commission by rule may require a compact waste disposal facility license holder to dispose of certain Class A low-level radioactive wastes that present a hazard because of their high radiation levels in the manner required for Class B low-level radioactive waste and Class C low-level radioactive waste under Subsection (b). To the extent practicable, rules adopted under this subsection shall be consistent with federal rules regarding classification of low-level radioactive waste under 10 C.F.R. Part 61.