NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
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MEMO TO : North Dakota Radioactive Material Licensees

FROM : Terry L. O'Clair, P.E.
Director
Division of Air Quality

RE : OPPORTUNITY TO COMMENT ON A DRAFT INFORMATION NOTICE (IN) 90-09 (REV. 1): EXTENDED INTERIM STORAGE OF LOW-LEVEL RADIOACTIVE WASTE BY FUEL CYCLE AND MATERIALS LICENSEES

DATE : March 4, 2008

The purpose of this memorandum is to inform you of the U.S. Nuclear Regulatory Commission's (NRC) Division of Waste Management and Environmental Protection intention to issue a revised version of IN 90-09 and to offer the opportunity for you to review and comment. Please review the enclosed NRC Information Notice 90-09 (REV. 1) for applicability to your operations and provide comment if so desired.

Additionally, the Low-Level Radioactive Waste (LLRW) disposal site in Barnwell, South Carolina will no longer be accepting waste from generators outside of the LLRW compact to which they belong. This change will occur as of July 1, 2008. Because access to the Barnwell disposal site will be greatly limited, it may result in difficulty for licensees throughout the United States in disposing of their LLRW. If you have LLRW in need of disposal, you may want to consider disposing of those materials prior to the date listed above.

If you have any questions about this Information Notice, please contact the Radiation Control Program at (701)328-5188.

CS:csc
Enc:

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

(FSME-08-021, February, Program, Information Notice (IN) 90-09)

February 18, 2008

ALL AGREEMENT STATES AND NON-AGREEMENT STATES
STATE LIAISON OFFICERS

OPPORTUNITY TO COMMENT ON A DRAFT INFORMATION NOTICE (IN) 90-09 (REV. 1): EXTENDED INTERIM STORAGE OF LOW-LEVEL RADIOACTIVE WASTE BY FUEL CYCLE AND MATERIALS LICENSEES (FSME-08-021)

Purpose: To inform you of the Division of Waste Management and Environmental Protection (DWMEP) intention to issue a revised version of IN 90-09 and to offer the opportunity for you to review and comment.

Background: Limiting disposal access at the Barnwell, South Carolina, Low-Level Radioactive Waste (LLRW) Disposal Facility to waste generators in States that comprise the Atlantic LLRW Compact as of July 1, 2008, is likely to require many radioactive materials users outside of that Compact who generate Classes B and C LLRW to store such waste. In anticipation, Nuclear Regulatory Commission (NRC) staff reviewed and updated guidance related to extended interim storage of LLRW by fuel cycle and materials licensees. Staff concluded that the most efficient and transparent means to accomplish this was to revise IN-90-09 issued in February 1990. Although the IN provides guidance and imposes no additional requirements on NRC licensees, staff considered that it may also be of some interest and utility especially to Agreement State radiation control programs and their licensees. Also, it is possible that some Agreement States may have proffered their own guidance to licensees on the topic of extended interim LLRW storage. For this reason, staff considers it appropriate to provide an advance copy of the proposed revision before finalization for review and comment by Agreement States, Non-Agreement States, and State Liaison Officers.

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*This information request has been approved by OMB 3150-0029, expiration 08/31/2010; OMB 3150-0200, expiration 06/30/2009; and OMB 3150-0163, expiration 10/31/2009. The estimated burden per response to comply with this voluntary collection is approximately 8 hours. Send comments regarding the burden estimate to the Records and FOIA/Privacy Services Branch (T-5F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0029), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC Point of Contact: Please provide any comments to the point of contact below within 30 days from the date of this letter. If you have any questions regarding this correspondence, please contact me or the individual named below.

FSME/DWMEP CONTACT: James Shaffner INTERNET: jas11@nrc.gov
TELEPHONE: (301) 415-5496 FAX: (301) 415-5369

/RA/
Dennis K. Rathbun, Director
Division of Intergovernmental Liaison
and Rulemaking
Office of Federal and State Materials
and Environmental Management Programs

Enclosures:
Review Draft IN 90-09 (Rev. 1)
1. Information Needed in an Amendment Request to Authorize Extended Interim Storage of Low-Level Radioactive Waste
2. Regional Compacts, Unaffiliated States and Territories
3. Bibliography

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
OFFICE OF FEDERAL AND STATE MATERIALS
AND ENVIRONMENTAL MANAGEMENT PROGRAMS
WASHINGTON, DC 20555
[Date]

NRC INFORMATION NOTICE 90-09 (REV. 1): EXTENDED INTERIM STORAGE OF LOW-LEVEL RADIOACTIVE WASTE BY FUEL CYCLE AND MATERIALS LICENSEES

ADDRESSEES

All holders of NRC materials licenses under Title 10, Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," Part 40, "Domestic Licensing of Source Material," and Part 70, "Domestic Licensing of Special Nuclear Material," of the *Code of Federal Regulations* (10 CFR Part 30, 10 CFR Part 40, and 10 CFR Part 70). All Radiation Control Program Directors and State Liaison Officers.

PURPOSE

This information notice (IN) provides guidance on the extended interim storage of Low-Level Radioactive Waste (LLRW), which revises and updates the guidance given in IN 90-09, dated February 5, 1990. It is expected that recipients will review the information for applicability to their facilities and consider appropriate actions to avoid difficulties associated with extended interim storage of LLRW. However, suggestions contained in this IN are not new requirements of the U.S. Nuclear Regulatory Commission (NRC); therefore, neither specific action nor written response is required. The NRC is providing this IN to the Agreement States for their information and for distribution to their licensees as appropriate.

DESCRIPTION OF CIRCUMSTANCES

The Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA) established a series of milestones, penalties, and incentives to ensure that States or regional compacts make adequate progress towards being able to manage their LLRW. Throughout the 1980s and 1990s, the States and compacts worked to implement the requirements of the LLRWPAA with limited success. After June 30, 2008, it is likely those LLRW generators and licensees in 36 States, the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Territories will lose access to the full-service LLRW (classes A, B, and C LLRW) disposal facility in Barnwell, South Carolina. Consequently, many LLRW generators will likely need to store a portion of their LLRW for an indefinite period. This will include Class B and C waste as well as certain Class A waste streams that do not meet the waste acceptance criteria of the LLRW disposal facility in Clive, Utah.[1]

[1] As part of its research for the revision of the IN, staff evaluated the possibility that NRC's expanded authority, pursuant to the Energy Policy Act of 2005 (EPAct 2005), over certain discrete sources of Radium – 226 and other naturally occurring and accelerator produced radioactive material (NARM) may create the potential for new LLRW streams that would require storage. However, EPAct 2005 specifically preserves pre-existing disposal options for this material.

Additionally the events of September 11, 2001, have changed the Nation's safety and security paradigm. Guidance for extended LLRW Storage needs to be considered in the context of changing regulatory requirements. For instance, additional requirements have been imposed on radioactive materials licensees who are authorized to possess radionclides of concern in quantities exceeding certain threshold limits (see, e.g., 70 Federal Register 72128 (December 1, 2005) (Order Imposing Increased Controls); 72 Federal Register 70901 (December 13, 2007) (Order imposing Fingerprinting, and criminal history record Checks Requirements for Unescorted Access to Certain Radioactive Materials)). Changes in license possession limits necessitated by interim storage of LLRW may result in possession of radionuclides of concern in quantities exceeding these threshold limits. In such cases, additional requirements – like those cited above – may be imposed on licensees.

The staff also prepared recommendations related to storage of all LLRW in SECY-94-198, "Review of Existing Guidance Concerning Extended Storage of Low-Level Radioactive Waste," dated August 1, 1994. To the extent that the recommendations relate to storage of LLRW by materials and fuel cycle licensees, they are reemphasized here.

DISCUSSION

Some licensees may need a license amendment to store LLRW on site. If the possession limits specified in a license need to be increased to allow for extended interim storage, or if the terms and conditions of a license otherwise need to be modified a license amendment or equivalent compliance mechanism will be required. Enclosure 1 to this IN identifies information that licensees will need to provide to the NRC or to consider in such amendment requests. This information may also be useful to other licensees as they assess the adequacy of their storage methods and to potential applicants for a license to construct and/or operate a centralized storage facility.

The following considerations are central to extended storage and are the basis of the information included in Enclosure 1:

(1) Storage is not a substitute for disposal. Other than storage for radioactive decay or other short-term operational considerations, LLRW should be stored only when disposal capacity is unavailable and for no longer than necessary. When feasible, licensee planning should specify a date by which storage of specific waste streams will end and disposal or alternative disposition (such as processing for radioactive waste volume reduction, or, in the case of sealed sources, return to manufacturer) of the LLRW will take place. As part of their planning efforts, licensees should also identify any stored waste streams (e.g., Class B, C, greater than Class C, unprocessed biological waste) for which no disposition pathway is reasonably foreseen, and be prepared to identify such waste streams to NRC officials upon request.

(2) Waste should be stored in a form suitable for disposal if there is sufficient assurance that the waste form is ultimately acceptable for disposal and will not require significant reprocessing. Licensees should process and/or package the waste to be stored in a manner consistent with physical stability and radiation protection goals including the consideration to keep exposure as low as reasonably achievable (ALARA). Processing and/or packaging should not preclude or diminish the likelihood of future transportation or alternative disposition pathways for any waste stream in accordance with

10 CFR Part 20, "Standards for Protection Against Radiation," Subpart K, "Waste Disposal." Individual circumstances will determine whether labeling containers of stored LLRW is required in accordance with 10 CFR 20.1904, "Labeling Containers," or exempt in accordance with 10 CFR 20.1905, "Exemptions to Labeling Requirements."

(3) To ensure the integrity of packaging and maintenance of waste form, stored waste packages should be protected from the elements (e.g., wind and precipitation) and from extremes of temperature and humidity. To the extent that circumstances make it impractical to provide such protection from climate, the licensee should determine how it will maintain package integrity and prevent the release of stored LLRW despite the exposure of stored waste packages to the elements. For example, maintaining a brief assessment of time-dependent deterioration that considers the specific packaging and form of the stored waste and a contingency plan for mitigation of such package deterioration to prevent radioactive release or contamination could constitute sufficient action to maintain package integrity.

(4) Waste should be stored in an area that permits ready visual (direct or remote) inspection on a routine basis. Licensees should plan to conduct and document such inspections at least quarterly (or on an alternative schedule as justifiable by an overall assessment of the inherent safety, stability, and security of the LLRW storage system).

The licensee should consider a real-time waste tracking system that allows the location of specific packages or accumulations of packages during emergencies.

(5) Depending on the specific waste involved, licensees may need to have procedures and equipment in place or readily available to repackage the waste if necessary.

(6) Decomposition and chemical reaction of incompatible waste materials over time can result in gas generation or other reaction products. Licensees should evaluate radioactive waste that they are planning to store and take measures to prevent or mitigate the adverse consequences of these reactions. Furthermore, licensees should determine if the need exists for additional ventilation, air filtration, or fire detection/alarm/protection/suppression systems.

(7) Most waste forms and packaging used for extended interim LLRW storage are not likely to represent a significant increment of direct radiation exposure potential to workers. However, licensees should consider their specific waste and storage plans and determine if additional radiation shielding or other actions are warranted to keep radiation exposures ALARA.

Waste should be stored in a manner that minimizes potential exposure to workers who are required to access it periodically. Licensees should consider possible alternative disposition pathways and times for different waste streams. In some cases, tradeoffs may be justified between package dose rate and ease of accessibility. In such cases, the NRC strongly recommends that licensees prepare an ALARA analysis to justify the tradeoff. Security considerations may also be factors in the analysis.

(8) Stored waste should be located in a restricted area or managed in accordance with Commission regulations in 10 CFR 20.1801, "Security of Stored Material," and 10 CFR 20.1802, "Control of Material Not in Storage." These regulations require

licensees (1) to secure, from unauthorized removal or access, licensed materials that are stored in controlled or unrestricted areas and (2) to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. When waste storage areas are unoccupied by authorized personnel, stored waste should be locked inside a facility (the storage area itself, an immobile safe, or a similar secure device with access limited to authorized personnel) as part of a key control system or equivalent system.

(9) Given the uncertainties regarding disposition alternatives for some LLRW, it may not be practical to establish a specific time limit for retention of LLRW in extended interim storage. However, the NRC recognizes that it is prudent practice to move LLRW from storage to permanent disposal/disposition as quickly as is practicable. Licensees storing LLRW are encouraged to develop and maintain a strategy and timeline for disposition and/or disposal of LLRW in their possession. Different strategies and timelines may be appropriate for waste streams having or requiring different disposition pathways. Waste streams for which the licensee can identify not foreseeable disposition pathway should be specifically acknowledged.

Notwithstanding the absence of a specific time limit for storage, NRC staff will undertake a licensing review of LLRW storage circumstances at the end of each license renewal period for NRC licensees. To facilitate such review, the NRC encourages licensees to periodically reassess the circumstances dictating indefinite interim storage of LLRW, impacts on licensed activities other than LLRW storage, and impacts on nearby unlicensed activities including activities not under licensee control. The assessment should also include a reevaluation of storage technique, technique for opening/inspecting/replacing packages, and recalculation of activity of LLRW in extended interim storage.

Licensees are also encouraged to maintain communication with regional compact and/or unaffiliated state and territorial officials (see Enclosure 2) regarding LLRW disposal options and change in disposal availability circumstances.

(10) To the extent possible, the licensee should estimate the total life-cycle financial burden of extended interim LLRW storage (including but not limited to operations and maintenance, inspection and monitoring, and eventual disposition) and provide this estimate to organization decision makers for overall budget consideration.

Storage of Hazardous Waste and Mixed Waste

Storage of hazardous waste, as specified under the Resource Conservation and Recovery Act, is beyond the scope of this document. Some licensees will need to store LLRW that also contains hazardous wastes. Either the NRC (or Agreement State) and the U.S. Environmental Protection Agency (or Authorized State) regulate these mixed wastes. The guidance provided here applies only to materials (LLRW) being stored in accordance with NRC regulations. It may be prudent or necessary for the licensee to supplement guidance contained in this notice with guidance (or requirements) provided by authorities with jurisdiction over the hazardous component of stored waste.

CONTACT

This IN requires neither specific action nor written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate regional office.

CONTACT: James Shaffner, FSME/DWMEP
(301) 415-5496
jas11@nrc.gov

Enclosures:
1. Information Needed in an Amendment Request to Authorize Extended Interim Storage of Low-Level Radioactive Waste
2. Regional Compacts, Unaffiliated States and Territories
3. Bibliography

INFORMATION NEEDED IN AN AMENDMENT REQUEST TO AUTHORIZE EXTENDED INTERIM STORAGE OF LOW-LEVEL RADIOACTIVE WASTE

The following identifies the information that the U.S. Nuclear Regulatory Commission (NRC) considers necessary in an amendment request from a materials or fuel cycle licensee to authorize extended interim storage of low-level radioactive waste (LLRW). Licensees whose LLRW storage circumstances do not dictate the need for license amendment may also find the information useful for a self-audit of the adequacy of their extended interim LLRW storage in conjunction with other licensed operations.

1. Identification of Waste To Be Stored

   a. Specify any possession limit increases needed for extended interim storage of LLRW. As discussed previously in this Information Notice, increases in possession limits to accommodate interim storage of LLRW may result in the imposition of additional requirements, such as the requirements described in the increased controls and fingerprinting orders issued to licensees authorized to possess certain quantities of radionuclides of concern (see, e.g., 70 Federal Register 72128 (December 1, 2005); 72 Federal Register 70901 December 13, 2007)). Licensees should note that, although low specific activity radioactive material inventories pose a low risk, the increased controls requirements were imposed on certain types of licensees, by either license condition or order based on authorized possession limits. Specific activity thresholds were not established for categorical exclusion. However, licensees were permitted request relief from the increased controls if compliance with any of the requirements was unnecessary in specific circumstances.

   b. Identify the estimated maximum amount of LLRW to be stored, both in terms of volume and activity, by radionuclide.

   c. Characterize the LLRW to be stored:

      (1) volume of waste by class (A, B, C, or greater than Class C)

      (2) physical form of the waste (solid, liquid, or gas)

      (3) any processing of the waste (volume reduction, solidification, or other treatment)

      (4) additional non radiological properties of LLRW, if any (e.g., toxic, biologic/pathogenic, corrosive, flammable)

   d. Describe the amount and type of LLRW currently being stored or processed and current disposition pathways (e.g., disposal by broker/processor, decay-in-storage).

   e. Identify any additional permits or approvals necessary for storage (e.g., U.S. Environmental Protection Agency hazardous waste permit, State, or local approvals) and the potential impact of such approvals on the future disposition of particular waste streams. The status of each approval should be provided.

2. Plans for Final Disposition

   a. Estimate the volume, activity, and specific waste streams that must be stored because disposal capacity/disposition options do not currently exist for the waste streams.

   b. For all waste streams likely to be stored for more than 1 calendar year for any discretionary reason (e.g., operational or business considerations), provide the disposition timeline and pathway. For waste streams that are likely to be stored for more than 1 calendar year for nondiscretionary reasons (e.g., lack of disposal capacity) dependent on third-party actions, provide estimates by or on behalf of the third party of the potential timeline and pathway of disposition. If no such estimate exists, provide an acknowledgement of the circumstance.

3. Physical Description of Storage Area or Storage Structure

   a. Identify the location and provide a description or diagram of the LLRW storage area (or storage structure) which demonstrates where packages will be stored and how packages will be accessible for inspection purposes. Include the locations of waste processing equipment (if applicable), air sampling stations, effluent filters, and any sources of flammable or explosive material and any sources of material that are mobile or could be rendered mobile (e.g., liquids, gases, sludges, ash, or fine-grained material) if the primary containment was compromised.

   b. Specify the maximum volume of LLRW that can be stored in the proposed waste storage area and relate this to the annual volume of waste generated.

   c. Specify the type of building/structure or enclosure within which the waste will be stored and briefly describe the means (if not self-evident) by which waste will be protected from deleterious impacts of both chronic (e.g., precipitation, changes in temperature, humidity) and applicable extreme (hurricanes, tornadoes) climatological conditions. Identify aspects of the storage area that require periodic maintenance or testing (e.g., mechanical and electrical systems, gaskets, and seals) and the frequency of such maintenance.

   d. Describe in general terms the measures to control access to the LLRW storage area and other methods, as applicable, to ensure security of the waste. It is not necessary for licensees that are implementing the increased controls requirements, to submit their increased controls documentation during the licensing process unless requested. The NRC strongly recommends not submitting such information and will rely on NRC inspectors to review this documentation during licensee inspections. However, whenever a licensee believes that this information is needed in order to respond to the increased controls requirements or to respond to an apparent violation, then the document may be submitted, provided it is properly marked in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

   e. For enclosed storage areas, describe the ventilation system and how it will assure adequate ventilation of the storage area.

f. Describe the fire detection, protection, and suppression system to minimize the likelihood and extent of fire.

g. Describe how the adverse effects of extremes of temperature and humidity, not climatologically induced or otherwise described according to item 3.c above, on waste and waste containers will be avoided.

h. Describe the vulnerability of the waste to other hazards, both anthropologically induced (e.g., industrial accidents) and, to the extent beyond the scope of item 3.c above, natural (e.g., flooding, earthquakes).

4. Packaging and Container Integrity

a. Describe the packages or containers to be used for storage of LLRW, any hazards the waste may pose to their integrity (structural stability, containment of radioactive waste, contribution to shielding, and utility of handling and manipulation), and the projected storage life of the packages or containers.

b. Describe the program for periodic inspections of LLRW packages to ensure that they retain their integrity and containment of LLRW.

c. Describe the program for the identification and mitigation of damaged, leaking, or deteriorating waste packages or containers (including, if applicable, equipment for remote handling and/or repackaging damaged or leaking waste containers). Additional, guidance related to possible problem areas related to waste packages and waste forms is found in NUREG/CR-4062, "Extended Storage of Low-Level Radioactive Waste: Potential Problem Areas."

5. Radiation Protection

a. Describe the program for safe placement and inspection of waste in storage and maintaining occupational exposures as low as is reasonably achievable (ALARA). This program should include periodic radiation and contamination surveys of individual packages and the storage area in general, as well as posting the storage area in accordance with 10 CFR 20.1902, "Posting Requirements." The radiation protection program, including the ALARA plan for the waste storage area or facilities, should be an integral part of the overall facility radiation protection program.

b. Describe projected exposure rates, needs for shielding (if any), and any changes in personnel monitoring which will be required as a result of waste storage.

To the extent that the license application does not address them elsewhere, describe the procedures for responding to emergencies, including triggering mechanisms, responsibilities and authorities, internal and external notifications and notification of and coordination with local fire, police, and medical departments and/or other emergency service providers. Consider formal agreements with emergency response providers that clearly define roles and responsibilities. Consider periodic drills. For licensees that are implementing or will be implementing the increased controls requirements, the specifics of a licensee's security program must be protected, and the specifics of the

radioactive materials possessed are sensitive security-related information. This information can be shared only with those who are considered trustworthy and reliable and have a need to know.

c. Describe the system for maintaining accurate records of waste in storage (including any waste receipts or transfers from or to other licensees) to ensure accountability.

6. Training and Qualifications

a. Describe the program for training personnel in procedures for packaging, handling, placement, inspection, surveying, and emergency response for LLRW storage.

b. Briefly outline minimum qualifications for all personnel responsible for aspects of LLRW storage (if they differ from those responsible for management of other licensed radioactive material). In most cases, management of LLRW storage will represent only a portion of individual job responsibility for a number of facility personnel. Estimate the percentage of each individual's time allocated to some aspect of LLRW storage.

7. Financial Assurance

a. Reaffirm the adequacy of financial assurance in accordance with 10 CFR 30.35, 10 CFR 40.36, or 10 CFR 70.25, all titled "Financial Assurance and Recordkeeping for Decommissioning," based on any increases in possession limits mandated by nondiscretionary extended interim storage. If amended possession limits exceed the limits specified in these sections, submit a decommissioning funding plan or certification of financial assurance as specified by regulation. In either case, this submittal should demonstrate that financial resources are or will be in place not only to decommission the licensed operation but also to provide for the reasonable best estimated cost of handling, transport, and disposal of all LLRW stored on site.

b. Confirm with the insurance provider the adequacy of facility liability and/or comprehensive insurance given the added requirement for extended interim storage of LLRW.

8. Emergency Preparedness

Reaffirm the adequacy of licensee emergency preparedness with respect to increased possession limits as a result of requirements for LLRW storage. Review the relevant sections of 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," 10 CFR Part 40, "Domestic Licensing of Source Material," and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," regarding emergency preparedness. If proposed maximum possession limits exceed the limits specified in 10 CFR 30.32(i)(1), 10 CFR 40.31(j)(1), or 10 CFR 70.22(i)(3), either demonstrate that an emergency plan is not needed or develop and maintain a plan that meets the requirements of these sections.

9. Security/Increased Controls

Take prudent security measures consistent with the attractiveness and accessibility of the material and vulnerability to theft and sabotage. Commission regulations in 10 CFR 20.1801, "Security of Stored Material," and 10 CFR 20.1802, "Control of Material Not in Storage," require licensees (1) to secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas and (2) to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.

Low specific activity radioactive material inventories pose lower risk. The NRC is issuing increased controls requirements to certain types of licensees based on their authorized possession limits. Specific activity thresholds were not established for categorical exclusion. Rather, implementation of the increased controls is based on possession of radionuclides of concern in quantities greater than or equal to the activity limits provided Table 1 of the increased controls orders (see, e.g., 70 Federal Register 72128 (December 1, 2005). There is a process by which a licensee may request relief from the increased controls if compliance with any of the requirements is deemed unnecessary in specific circumstances.

The NRC strongly recommends that licensees not submit their increased controls documentation during the licensing process. NRC inspectors will review this documentation during licensee inspections. However, whenever a licensee believes that this information is needed to respond to the increased controls requirements or to respond to an apparent violation, then the licensee may submit the document, provided that it is properly marked in accordance with 10 CFR 2.390.

For licensees implementing the increased controls requirements, the specifics of a licensee's security system must be protected. Further, specific information related to the radioactive materials possessed is considered sensitive security-related information that can be shared only with those who are considered trustworthy and reliable and have a need to know. Licensees who need assistance in determining when such information can be appropriately shared with public officials should contact the appropriate NRC regional office.

LOW-LEVEL RADIOACTIVE WASTE COMPACTS

COMPACT	NAME/ADDRESS	PHONES/FAX/EMAIL
Appalachian Compact	**David Allard** Bureau of Radiation Protection Department of Environmental Protection Commonwealth of Pennsylvania Rachel Carson State Office Building 400 Market Street, PO Box 8469 Harrisburg, PA 17105	(717) 787-2480 (717) 783-8965 djallard@state.pa.us
Atlantic Compact	**Max Batavia** Executive Director Atlantic Interstate Low-Level Radioactive Waste Commission 1201 Main Street, Suite 600 Columbia, SC 29201	(803) 737-1879 (803) 737-5023 mbatavia@microbyte.net
Central Compact	**Rita Houskie** Administrator Central Interstate Low-Level Radioactive Waste Commission 1033 "O" Street, Suite 636 Lincoln, NE 68508	(402) 476-8247 (402) 476-8205 rita@cillrwcc.org
Central Midwest Compact	**Marcia Marr** Executive Director Illinois Emergency Management Agency 1035 Outer Park Drive Springfield, IL 62704	(217) 785-9982 (217) 785-9977 marcia.marr@illinois.gov
Midwest Compact	**Stanley York** Midwest Interstate Low-Level Radioactive Waste Compact Commission 2851-1 Century Harbor Middleton, WI 53562-1824	(608) 831-5434 stan.york@tds.net
Northwest Compact	**Mike Garner** Executive Director Northwest Interstate Compact on Low-Level Radioactive Waste Washington Department of Ecology PO Box 47600 Olympia, WA 98504-7600	(360) 407-7102 (360) 407-7152 jamg461@ecy.wa.gov
Rocky Mountain Compact	**Leonard Slosky** Executive Director Rocky Mountain Low-Level Radioactive Waste Board 1675 Broadway, Suite 1400 Denver, CO 80202	(303) 825-1912 (303) 892-3882 lslosky@rmllwb.us

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Enclosure 2

LOW-LEVEL RADIOACTIVE WASTE COMPACTS

COMPACT	NAME/ADDRESS	PHONES/FAX/EMAIL
Southeast Compact	**Kathryn Haynes, M.P.H** Executive Director Southeast Compact Commission 21 Glenwood Ave., Suite 207 Raleigh, NC 27603	 (919) 821-0500 (919) 821-1090 khaynes@secompact.org
Southwestern Compact	**Don Womeldorf** Executive Director Southwestern Low-Level Radioactive Waste Commission PO Box 277727 Sacramento, CA 95827-7727	 (916) 448-2390 (815) 361-3680 swllrwcc@swllrwcc.org
Texas Compact	**Susan Jablonski** Texas Commission on Environmental Quality PO Box 13087, Mail Code 122 Austin, TX 78711-3087	 (512) 239-6731 (512) 239-5151 sjablons@tceq.state.tx.us

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UNAFFILIATED STATES

COMPACT	NAME/ADDRESS	PHONES/FAX/EMAIL
District of Columbia	**Gregory Talley** Program Manager, Radiation Protection Division Environmental Health Administration Department of Health District of Columbia 51 N Street, Room 6025 Washington, DC 20002	(202) 535-2320 (202) 535-1359 greg.talley@dc.gov
Maine	**Charles Pray** State Nuclear Safety Advisor State of Maine 112 State House Station Augusta, ME 04833-0011	(207) 287-8936 (207) 287-4317 charles.pray@maine.gov
Massachusetts	**Robert Walker** MA Department of Public Health Radiation Control Program Schrafft Center Suite 1M2A Charlestown, MA 02129	(617) 242-3035 ext 2001 (617) 242-3457 bob.walker@state.ma.us
Michigan	**Thor Strong** Acting Commissioner Department of Environmental Quality PO Box 30241 525 West Allegan Lansing, MI 48909	(517) 241-1252 (517) 241-1326 strongt@michgan.gov
Nebraska	**Carla Prange** Manager Low-Level Radioactive Waste Program Department of Environmental Quality State of Nebraska 1200 N Street, Suite 400 Lincoln, NE 68509-8922	(402) 471-3380 (402) 471-4840 carla.felix@ndeq.state.ne.us
New Hampshire	**Mary Ann Cooney** Director of Public Health State of New Hampshire 29 Hazen Drive Concord, NH 03301	(603) 271-4501 (603) 271-4827 www.dhhs.nh.gov
New York	**Jack Spath** Program Manager Radioactive Waste Policy and Nuclear Coordination Energy Research & Development Authority State of New York 17 Columbia Circle Albany, NY 12203-6399	(518) 862-1090 ext 3302 (518) 862-1091 jps@nyseda.org

UNAFFILIATED STATES

COMPACT	NAME/ADDRESS	PHONES/FAX/EMAIL
North Carolina	**Beverly Hall** Radiation Protection Section Department of Environment and Natural Resources State of North Carolina 3825 Barrett Drive Raleigh, NC 27609-7221	(919) 571-4141 (919) 571-4148 beverly.hall@ncmail.net
Rhode Island	**Terrance Tehan** Director Atomic Energy Commission State of Rhode Island 16 Reactor Road Narragansett, RI 02882	(401) 789-9391 (401) 782-4201 ttehan@gso.uri.edu
Commonwealth of Puerto Rico	**Raul Hernandez** Director Radiological Health Division Department of Health PO Box 70184 San Juan, PR 00936-8184	(787) 274-5815 (787) 274-6829 rhernandez@salud.gov.pr
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Bibliography

The NRC staff believes that the following references may be helpful to specific licensees or categories of licensees to supplement the guidance provided herein. This list is not all inclusive.

[1] Electric Power Research Institute- "*Guide for Operating an Interim On-Site Low-Level Radioactive Waste Storage Facility*", October 2004

[2] Illinois Department of Nuclear Safety- "*Extended Storage of LLRW by Materials Licensees*"

[3] International Atomic Energy Agency, Safety Guide No. WS-G-6.1, "*Storage of Radioactive Waste*", November 2006

[4] Texas Administrative Code Section 289.254 "*Licensing Radioactive Waste Processing and Storage Facilities*"

[5] U.S. Department of Energy, DOE M 435.1, Radioactive Waste Management Manual

[6] U.S. Nuclear Regulatory Commission, Code of Federal Regulations-10 CFR 20.1801-Security of Stored Material

[7] U.S. NRC NUREG/CR-4062, "*Extended Storage of LLRW: Potential Problem Areas*" December 1985

NOTE TO NRC AND STATE REVIEWERS: Please provide any additional bibliographical citations that would be appropriate to include herein