
The

Radioactive Exchange®

To promote the exchange of views and information on radioactive waste management

INSIDE: Jenrich Leaves EG&G.....pg. 2
Lead Burial Restrictions.....pg. 3
MI LLRW Siting Bill Held Up.....pg. 3
A RCRA Permit For Hanford?.....pg. 4
Wrap Up (LLRW).....pg. 6
Midwest Compact RFP.....pg. 8
LLRW Volume Disposal Update.....pg. 9

the HLW Focus.....pg. 10
NV On DOE Environmental Work.....pg. 11
Carbon Steel HLW Containers.....pg. 12
LWV Gets DOE HLW Grant.....pg. 13
Wrap Up (HLW).....pg. 14
Calendar.....pg. 16

Volume 6 No. 21 [Part II]

December 7, 1987

JOHNSTON'S HLW BILL STYMIED BY HOUSE LEADERS, SENATE COLLEAGUES

In the closing days of the Congressional session, the fate of the nuclear waste legislation looks like it will be tied to the volatile, eleventh-hour politics of the federal budget. And -- a Western style standoff with Johnston and McClure first facing off with Simpson, Breaux, Udall, Dingell, and Sharp, and probably ending up with Udall bringing everyone to their senses to save the day, the bill and their mutual respect.

Johnston's effort to have a conference on the Energy and Water Appropriations bill, HR 2700, which includes his HLW bill, S.1668, continues to be stymied. Simpson has not relented on his intent to have Johnston appoint Breaux and himself as conferees. He refuted Johnston's claim that the appointment of non-Appropriations members would be unprecedented by uncovering such an assignment in an earlier Congress, and continues to hold his ground, while supporting a negotiation scenario within the context of deliberations on the Budget Reconciliation bill.

On the House side what looked like a possibility of holding a mini-conference (See **HLW Bill** in **the HLW Focus**)

MASSACHUSETTS FINALLY ADOPTS LLRW FACILITY SITING BILL

After a five year gestation period, the Massachusetts Legislature finally adopted legislation establishing a state program to site a LLRW burial facility. Governor Dukakis is expected to sign the measure into law on December 8.

Most, if not all of the credit for the passage of this monumental legislation must be given to Senator Carol Amick, who co-chaired the states Special Legislative Commission which developed the bill, and who serves as Chairman of the State Senate Committee on Natural Resources. She was also the co-chair of the original Coalition of Northeastern Governors group which attempted to establish a regional compact encompassing all of the Northeast states. In an interview with the EXCHANGE she reported that after five years and almost a year of legislative deliberation there were still member concerns that had to be dealt with up to the final day of passage. One was an amendment, put forth by a House member, that wanted to exclude all nuclear reactor waste from burial at the proposed state facility. A compromise was reached that met his concerns and the bill passed. (See **Massachusetts**, pg. 2)

(Massachusetts from pg. 1)

The Senator intimated that, when she began what turned about to be this arduous task, she was pregnant with child-- a girl who just turned five.

The Last Compromise

Prior to the passage of the Act, Senator Amick was pressed to work out compromise language that would satisfy the concerns of a House member who was opposed to the state's burial facility accepting LLRW from nuclear power plants. The final agreed upon language which cleared the final hurdle to passage goes as follows:

"No low-level radioactive waste shall be accepted from electric power generating facilities if such waste requires management more stringent than the most stringent waste requirement for any low-level radioactive waste accepted at the facility from another generator."

The language achieved the health and safety protection that the House member felt was necessary.

Legislation Overview

The bill, as adopted, is, for the most part, identical to the proposal introduced by Senator Amick following its development by the Special Legislative Commission. It does not include the "so called" 503 provisions, that required a public referendum and legislative approval of the final site selection. These provisions were dropped following the issuance of an opinion by the Supreme Judicial Court that they were unconstitutional.

The final legislative package did include language to have it take effect immediately, and an appropriations of \$600,000 to fund startup of the program. Provisions were also included directing the state's Department of Public Health to seek Agreement State Status.

The key elements of the soon-to-be enacted law are as follows:

- o Establishment of a LLRW Management Board, with the responsibility for site selection, and the overall program. Initially, the Board is to have nine members with two more being appointed from the Host community after site selection.
- o A comprehensive and detailed site selection process that directs the characterization of at least two, but no more than five potential sites.
- o The selected local host community is given the authority to select the disposal technology and the site operator. The state is to prepare a list of suggested contractors.
- o Shallow land burial is prohibited.

Compact Being Pursued

Senator Amick made it clear that now that the bill is passed the next step will be to get a compact together. She is already hard at work to get an agreement with a small generating state and will be pressing the executive branch to move quickly. **

MAJOR SHAKE UP IN EG&G LLRW PROGRAM

Ed Jennrich the Director of DOE-EG&G's National LLRW Management Program has resigned from his post. For the past eight years, four of those as the Program Director, Ed has been a key factor in restructuring the national effort to manage low-level radioactive waste. He has served as mentor and advisor to both state and federal agencies, and the industry. His departure definitely breaks up, what has been up to this time, an excellent communication network among all interested parties. DOE will surely miss having his skills on call as a consultant. **

WASHINGTON STATE RESTRICTS BURIAL OF LEAD SHIELDING AT HANFORD

In a mid-November letter to the US Ecology Nuclear President Thomas Baer, Roger Stanley, Washington State's Department of Ecology Hanford Project Manager writes that because of the state's "continuing concern over the disposal of uncontaminated lead in use at shielding...such materials are not acceptable for disposal" at the Richland LLRW burial facility until the state's concerns are addressed. Mr. Stanley explains that the state's position is based on "the simple fact that the environment does not distinguish between lead which may emanate from a shielded waste shipment and that originating from other lead bearing containers which are more clearly interpreted as regulated under the RCRA/state hazardous waste program."

Detailed Data on Lead Requested

In order for the state to address its concerns, Mr. Stanley requests that US Ecology provide the following information:

- o "A listing of the different types of lead that have been, or are disposed at the Richland site...including both known and estimated volumes."
- o "A discussion of the different packaging requirements under RCRA, DOT, NRC, and DSHS regulations, including US Ecology's view of any possible inconsistencies or incompatibility between them."
- o "Identification and discussion of any alternative packaging methods which generators could follow to improve lead containment, e.g., special encapsulation requirements such as the use of high integrity containers."
- o "If current packaging methods are, in [US Ecology's] opinion, questionable, or are not feasible for all types of lead,... provide an analysis of special waste management practices that could be implemented at the US Ecology site to provide better overall containment. Some of these may include: waste

segregation, design features such as membrane liners, or complexing agents which could limit lead mobility at the molecular or particulate level."

- o "Knowledge... of efforts aimed at lead use minimization employed by, either US Ecology, low level waste brokers, or generators.

A Warning Given

Mr. Stanley advises President Baer that in his view the regulatory inequity with regard to the disposal of lead that currently exists under EPA regulations and policy (See letter from Marcia Williams to Terry Husseman, EXCHANGE Vol. 6 No. 12) is one which should prompt a detailed hazard assessment which would likely result in regulatory revision, and which the state consequently intends to pursue with the Environmental Protection Agency, the Nuclear Regulatory Commission, and with US Ecology."

US Ecology Reaction

US Ecology has reviewed Mr. Stanley's information requests and concluded that much of the data requested is "just not available." **

MICHIGAN PASSAGE OF LLRW SITING BILL HITS SNAG

David Hales, Michigan's Midwest Compact Commissioner and Executive Director of the State's LLRW office reports that expected state passage of Michigan's LLRW facility siting bill has hit a snag because of the insistence by the state House of Representatives that the bill include a provision that would have the legislature participate in LLRW burial site selection through a concurrent resolution process. The House had passed the Bill with this provision, sent it on to the Senate which then adopted the measure without the House language. All but one Senator voted against inclusion of the House's proposal. The bill now goes to conference on Monday, December 7, the only issue being legislative involvement in final site selection.

A LLRW Czar

Michigan's LLRW facility siting bill is unique among the proposals adopted or introduced by the various states over the past several years. In contrast to establishing a multimember Management Board, it sets up an independent Authority headed by a single executive who is given the authority to make the final site selection. This "Czar" is to be appointed with the "advice and consent" of the Senate and only for a two year term. A reappointment would necessitate a re-confirmation by the Senate.

The Authority is given discretionary power with regard to the site selection process but detailed site selection criteria are included in an exclusionary and inclusionary manner. A site within 10 miles of the Great Lakes is excluded, unless it is adjacent to a nuclear plant.

The bill provides for an incentive payment to the selected host community in addition to payments in-lieu-of-taxes. The Authority is directed to develop a fee structure that in addition to supporting the operation of the host will provide revenues for the Clean Michigan Fund and support the training of fire protection personnel within the host area.

A State Owned and Operated Facility

The Authority is given the power to develop, construct and operate the disposal facility. The current view is that a site operator-contractor will not be retained but there remains the possibility of using a contractor on a "concessionaire" basis with the state retaining management responsibility.

The bill does not provide a way of raising funds to cover the expense of putting together a site license application. The Authority does have the ability of using revenue bonds to raise money.

Site Development Timetable

According to Mr. Hales, in the most optimistic case, Michigan could have a site

in operation in late Fall of 1993 -- missing the final Low Level Radioactive Waste Policy Act (LLRWPA) deadline by six or seven months. The state will also miss the 1990 deadline for submission of a license application. All the compact Commissioners are aware of the timetable, and are now seeking to obtain their respective Governor's certification accepting responsibility for LLRW generated within their boundaries when 1993 comes around on no regional site is in operation. The "certifications" will be the primary agenda item at the next Compact meeting on December 18.
**

US ECOLOGY, WA STATE, FED OFFICIALS MEET ON RICHLAND RCRA PERMIT

On January 12, top management staff from US Ecology Nuclear, including President Tom Baer, will meet with Washington state's Department of Ecology officials, and representatives of the U.S. Nuclear Regulatory Commission (NRC) and U.S. Environmental Protection Agency (EPA) to discuss US Ecology's request to be allowed to pursue obtaining a joint RCRA/LLRW permit for the Richland commercial burial site. The meeting is to be held in Olympia, Washington and was arranged by US Ecology at the invitation of Roger Stanley the Hanford Project Manager for Washington state's Department of Ecology.

The session is the outgrowth of a formal request from Mr. Baer to Mr. Stanley and NRC and EPA officials, that US Ecology be "allowed to withdraw its existing Richland site Part B post closure permit application and resubmit in it's place, a joint RCRA/LLRW permit "for the Richland commercial burial facility.

In response to this October request, Mr. Stanley wrote on November 13 that US Ecology must proceed with closure of the Richland site as a hazardous waste facility and that "any formal request for withdrawal of [US Ecology's] Part B application would be denied on receipt." With regard to US Ecology's proposal to institute an expedited process in order to obtain a joint RCRA/LLRW permit at the Richland site, Mr. Stanley was also not all that forthcoming.

He informed Mr. Baer that the schedule US Ecology outlined in the October 13 letter for obtaining a RCRA/LLRW permit was "optimistic...not at all feasible in that it ignore[d] the requirements and due course of the RCRA/state hazardous waste facility permitting process."

A Proposed Expedited Part B Permit Process

In the October letter requesting an expedited permitting process to obtain a Part B permit for the Richland burial facility, US Ecology Nuclear President Baer points out that though EPA, under the Hazardous Solid Waste Act (HSWA) "is mandated by Congress to have acted on all hazardous waste landfill permits by November 8, 1988," the current permitting process, based on US Ecology's experience takes "three to four years," therefore making pursuit of a RCRA permit for the Richland facility "frivolous." In lieu of this traditional process, Baer then suggests a mechanism that would provide for submittal of a draft Part B permit application for Richland by July 1, 1988.

The process Baer suggests is as follows:

- o Early Agreement on the process to be followed by all the affected agencies.
- o Submittal of the application by US Ecology to DSHS, WDOE, EPA and NRC by 1/31/88. This application would include a "number of variations from humid area RCRA criteria, since Richland is located in a semi-arid area. These variations would not result in "any

increased technical threat to the environment. They would include "a requested variance from the HSWA minimum technical requirements (MTR) for landfill construction as provided for in section 3004 of HSWA, transfer of responsibility for waste stream analysis verification to the generator, as currently regulated and enforced under Atomic Energy Act (AEA) philosophy (with limited inspection by the TSD facility), and variations on groundwater monitoring techniques.

- o Agencies' issuance of comments on the application and a draft Compliance and Enforcement (C/E) Agreement by 4/10/88.
- o US Ecology review of comments and draft C/E document by 5/1/88.
- o A meeting between US Ecology and federal/state agency representatives to iron out the details and come to agreement in principle on the entire permit application between 5/1-5/15/88.
- o Submission of a final draft permit by US Ecology to the agencies for review and action by 7/1/88. Washington State's Environmental Policy Act (SEPA) review would contain a mitigated determination of nonsignificance for incremental effect. Thus little or no public comment would be required considering that no waste technically different from that accepted in the past is being proposed. Any public hearing would be scheduled prior to 9/1/88. **

REPORTS OF NOTE (LLRW)

Solidification of Problem Wastes Annual Progress Report (October 1985- September 1986) BNL 52078; Nuclear Waste Research Group, Department of Nuclear Energy, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, New York 11973. This report describes initial work on the development of solidification systems for sodium nitrate waste and compacted waste. Sodium nitrate waste has been solidified in three types of materials: polyethylene, polyester-stryene (PES), and latex cement. Evaluations of the properties of the waste form, such as the ANS 16.1 leaching test, water immersion test and compressive strength measurements were performed on the waste forms containing various amounts of sodium nitrate.

Wrap Up (LLRW)

IN CONGRESS

Over the last week or so, **Texas Congressman Ronald Coleman**, in an attempt to support the efforts of his constituents in the city of El Paso, Texas to stop the development of a LLRW facility in Hudspeth county (See related story in **Wrap Up**), threatened to introduce an amendment to the House version of the Continuing Resolution that would prohibit location of a LLRW disposal facility within 60 miles of the border with Mexico. He agreed not to do so when he was assured that Interior Chairman Udall would hold a hearing sometime next year on a separate bill that would do just that.

IN THE MIDWEST

A little stir was raised at the most recent meeting of the Midwest Compact Commission when Michigan's David Hales questioned a significant jump in monthly LLRW deliveries from the state of Missouri. Missouri's Ron Kucera explained that it was a one time occurrence resulting from a cleanup at a federal defense contractor facility. This revelation led to a discussion of just how much "federal" waste could be expected to be delivered to a commercial regional burial site in the future. No specific data was available, and Michigan's Hales expressed concern that this could be a significant quantity and requested that the Commission act to obtain the information from the federal agencies. Each member state was requested to obtain the information. There was at least the hint in Michigan's comments that possibly the amount of LLRW that could be expected from federal facilities or contractors could possibly alter host state selection. The criteria the Midwest applied in selecting the regional host -- Michigan -- was, as far as the EXCHANGE can determine, based on average annual LLRW generation rate, and did not take into account one time special disposal needs nor accounted for "federal waste."

IN TEXAS

Pending litigation continues to delay the beginning of site characterization work at Texas' preferred site in Hudspeth County.

A scheduled December 7 hearing on the city of El Paso's suit charging that the preferred site location is in violation of state water law has been delayed. The judge decided to delay proceedings until the State Supreme Court rules on El Paso's appeal of an earlier lower court ruling that would have allowed the Authority to start site characterization work. The State Supreme Court has not yet set a date for the appeal. The Authority continues to proceed to conduct generic studies on site design.

IN CALIFORNIA

The final selection of California's preferred LLRW disposal site has been delayed somewhat while the state considers the possible consequences to the habitat of the Desert Tortoise. The candidate sites have been paired down to two, one in Ward Valley and one in the Silurian Valley, from an initial list of three. Both would more than satisfy the state licensing requirements governing LLRW disposal. However, the site in Ward Valley has been determined by US Ecology to be the more technically superior location. The groundwater level at this location has been found to be more than 700 ft. below the surface. It is also more seismically stable than the Silurian site and has less surface water runoff. However, it also happens to be a habitat of the Desert Tortoise.

This tortoise, which grows to about 1 ft. or so in diameter, and can live for over 100 years is on the state Department of Fish and Game's "candidate threatened species list." It generally lives out its life within a very close proximity to where it was hatched.

The decision on whether to select the Ward Valley site is now in the hands of the Department of Fish and Game. The department is attempting to determine if relocating the Desert Tortoises that are in the site location would be detrimental to their existence.

The other site, within Silurian Valley, is technically suitable but, according to US Ecology will cost considerably more to

develop into a LLRW burial site. It has more surface water runoff than the Ward Valley site and will require more engineering.

The final selection of the preferred site from among these two is expected to be made this month.

IN THE NRC

The NRC **Advisory Committee on Reactor Safeguards (ACRS)** Chairman William Kerr has written Commission Chairman Zech, on behalf of the full Committee, expressing concern that NRC staff has not adequately addressed "the specific bases for some of the requirements specified in various Technical Positions and the connection between these requirements and the NRC regulations they are designed to support." Kerr further charges that "in some cases, these requirements appear to have been introduced only for the convenience of Agreement States or the operators or shallow-land burial facilities."

As an example of where the ACRS believes that the NRC staff has made such accommodations, he cites the Technical Position on Low-Level Waste Form. He explains that in ACRS' view-- "this document demonstrates a need by the NRC staff to define more clearly the connection between the requirements for testing the waste form and the regulations governing its performance." It is recommended that the LLRW management staff "reexamine the fundamental bases that led to the formulation of the Technical Position and its requirements, and ensure that the test and performance requirements are pertinent to the conditions likely to be found in shallow land burial facilities."

The ACRS Chair points out that although the Technical Position requires leach testing of LLRW form, the staff, in ACRS' view, did not demonstrate "an explicit connection between this requirement and regulatory criteria." If the staff cannot make this connection he advises the Commission that the requirement be deleted.

IN THE INDUSTRY

Westinghouse Specialty Services, Inc., a wholly owned subsidiary of Westinghouse Electric Corporation, and **National Electric, Inc. (NEI)**, have formed a partnership to provide a broad range of environmental services in the area of hazardous waste management. The new venture, called **Aptus**, expands the waste management services currently offered by both companies. Additional services include hazardous waste testing, classification, collection, transportation, incineration and site remediation.

According to company spokesmen, the new partnership will offer the broadest range of polychlorinated biphenyl (PCB) services in the industry.

Hydro Nuclear Services, Inc., a subsidiary of Westinghouse Electric Corporation, has acquired distribution rights to two European systems for cleaning contaminated laundry at nuclear facilities. The wet-wash systems of **EM. D'Hooge, Belgium**, and the dry-cleaning, fluorocarbon systems of **Spencer from the United Kingdom** are available to the nuclear industry in North America through an exclusive distributorship agreement with Westinghouse.

The systems are designed in "barrier" configurations that allow for loading of contaminated articles through one side and removal of decontaminated articles from the other side. The D'Hooge units are available with a self-contained laundry water recycling system to allow wet wash with no support required from in-plant water treatment systems. Submicron "hot" particles are effectively dislodged from clothing articles and removed by the recycling filtration process. For more information, contact Paul Greenbaum at Hydro Nuclear Services, Inc., 1256 N. Church St., Moorestown, N.J. 08057, (609) 722-5745.

ON THE MOVE

Cleveland-based **Mk-Ferguson Company** announced the promotion of two of its Power Division executives: **William A. Hughes** has

been named Senior Vice President, Power Division Operations. He previously served as Power Division Vice President, Operations. **Peter W. Miller** has been promoted to Vice President, Business Development, for the Power Division. He was formerly Business Development Director.

Illinois Department of Nuclear Safety (IDNS) has hired **Thomas Kerr** to head up its low-level radioactive waste (LLRW) program. Kerr assumed his position as chief of the Division of LLRW Management on November 2. Immediately before joining IDNS, Mr. Kerr was a training instructor in LLRW management and health physics for Duke Power Company in Mt. Holly, N.C. Prior to working for the utility, he spent seven and a half years working for Chem-

Nuclear Systems, Inc. at its disposal facility in Barnwell, S.C.

Lanny Johnson, Massachusetts' exuberant spokesman for LLRW management has resigned his position as Undersecretary and Chief of Staff for Environmental Affairs. **Bill Eichbaum**, formerly with the state of Maryland has now assumed this post. Lanny is now working on Gov. Dukakis' Presidential campaign.

Jack C. Newell, P.E., and Frederick Thompson, Ph.D., P.E. have been promoted to Executive Vice Presidents of **Roy F. Weston, Inc.** Both have been assigned increased management responsibilities as part of the Company's overall management plan. **

REQUEST FOR PROPOSALS MIDWEST LLRW COMPACT COMMISSION

Proposals are hereby solicited for on-call consultant services to assist the Commission and Host State in the development of a low-level radioactive waste disposal facility. Although the Commission has the authority to negotiate sole source contracts, it has directed that proposals be solicited for these services. This request for proposals does not obligate the Commission to award a final contract. The Commission reserves the right to reject any and all proposals or to cancel the solicitation if it is considered to be in its best interest.

The objective of the proposed contract is to provide on-call access to expertise for the purpose of conducting technical/peer review of Commission or Host State work products and providing other technical assistance to the Commission or, at the Commission's request, to the Host State. Such assistance would be provided for currently unspecified and unscheduled tasks. While the Commission can not estimate with any certainty the needed level of effort, it is likely to be in the range of 500 to 1,000 hours annually.

The assistance is required to be available at a previously agreed upon unit cost and in a manner that would ensure prompt contractor response. At the time that the Commission desires such assistance, it would submit a written task order to the contractor. The task order would specify the type of assistance requested, the deliverables, and a proposed schedule. Negotiations between the Commission and the contractor would determine the final level of effort, schedule, and cost, based on the unit cost agreed to in the contract. For copies of the RFP call Greg Larson at the Offices of the Midwest Compact (612) 293-0126. The deadline for submission of proposals is January 8, 1988. **

LLRW Volume Disposal Update

LLRW ACCEPTED FOR DISPOSAL AT BARNWELL, BEATTY AND HANFORD

Through OCTOBER 1987
(Volumes in Cubic Feet)

	<u>OCTOBER</u>	<u>Year to Date</u>		<u>OCTOBER</u>	<u>Year to Date</u>
Northeast			Rocky Mountain		
Connecticut	1,105.00	26,942.00	Colorado	902.90	2,439.00
New Jersey	6,258.50	35,680.90	Nevada	0.00	15.00
	<u>7,363.50</u>	<u>62,622.90</u>	New Mexico	0.00	990.00
			Wyoming	0.00	0.00
				<u>902.90</u>	<u>3,444.00</u>
Appalachian			Western III		
Pennsylvania	18,911.02	111,863.12	South Dakota	0.00	0.00
West Virginia	0.00	0.70	Arizona	3,627.70	13,884.30
Maryland	4.00	16,918.90		<u>3,627.70</u>	<u>13,884.30</u>
Delaware	360.00	1,284.66			
	<u>19,275.02</u>	<u>130,067.38</u>			
Southeast			Northwest		
Georgia	12,056.92	26,889.67	Idaho	0.00	1.50
Florida	11,896.90	39,833.10	Washington	910.00	34,694.80
Tennessee**	39,706.50	161,609.10	Oregon	7,457.10	65,452.60
Alabama	6,125.50	61,174.50	Utah	0.00	1,372.50
N. Carolina	10,384.18	69,705.78	Alaska	0.00	40.00
S. Carolina	18,199.21	98,766.11	Hawaii	0.00	2,598.00
Mississippi	874.20	11,504.40	Montana	0.00	38.20
Virginia	9,823.12	57,318.37		<u>8,367.10</u>	<u>104,197.60</u>
	<u>109,066.53</u>	<u>526,801.03</u>			
Central States			Unaligned		
Arkansas	1,148.40	13,861.60	Rhode Island	206.60	992.80
Louisiana	364.00	16,114.70	Vermont	1,528.20	7,236.90
Nebraska	1,576.00	15,940.40	New Hampshire	604.80	1,814.80
Kansas	0.00	4,036.40	Maine	0.00	2,749.70
Oklahoma	10,047.00	62,378.90	New York	7,647.13	55,797.93
	<u>13,135.40</u>	<u>112,332.00</u>	Massachusetts	3,635.70	39,895.40
			Texas	5,274.00	54,935.50
			North Dakota	0.00	2.90
			California	6,238.10	73,111.80
			Puerto Rico	0.00	0.00
			D.C.	0.00	135.00
				<u>25,134.53</u>	<u>236,672.73</u>
Central Midwest			TOTAL:	213,939.66	1,446,283.18
Illinois	17,665.40	161,457.90			
Kentucky	0.00	175.70			
	<u>17,665.40</u>	<u>161,633.60</u>			
Midwest					
Wisconsin	987.70	4,725.40			
Indiana	525.80	1,808.20			
Iowa	489.90	15,479.10			
Ohio	1,700.18	12,859.38			
Michigan	4,514.70	28,614.80			
Minnesota	198.10	11,349.66			
Missouri	985.20	19,791.10			
	<u>9,401.58</u>	<u>94,627.64</u>			

**The LLRW Volumes reported from Tennessee and possibly small volumes from a few other states may include waste delivered by generators in other states to a TN-based regional processing facility and then shipped to Hanford, WA for disposal. We are working with site operators to correct the figures.

