The

Radioactive Exchange®

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

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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)

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(**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 a 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 (LLRWPAA) 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:

- Early Agreement on the process to be followed by all the affected agencies.
- 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.
- Agencies' issuance of comments on the application and a draft Compliance and Enforcement (C/E) Agreement by 4/10/88.
- US Ecology review of comments and draft C/E document by 5/1/88.
- 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.
- 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 wate. 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.

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 to 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 sie 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 it's 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' exhuberant 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 the 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 ACCEPTED FOR DISPOSAL AT BARNWELL, BEATTY AND HANFORD

Through OCTOBER 1987
(Volumes in Cubic Feet)

	OCTOBER	Year to Date
Northeast		
Connecticut	1,105.00	26,942.00
New Jersey	6,258.50	35,680.90
	7,363.50	62,622.90
Appalachian		
Pennsylvania	18,911.02	111,863.12
West Virginia	0.00	0.70
Maryland	4.00	16,918.90
Delaware	360.00	1,284.66
	19,275.02	130,067.38
Southeast		
Georgia	12,056.92	26,889.67
Florida	11,896.90	39,833.10
Tennessee**	39,706.50	161,609.10
Alabama	6,125.50	61,174.50
N. Carolina	10,384.18	69,705.78
S. Carolina	18.199.21	98,766.11
Mississippi	874.20	11,504.40
Virginia	9,823.12	57,318.37
	109,066.53	526,801.03
Central States		
Arkansas	1,148.40	13,861.60
Louisiana	364.00	16,114.70
Nebraska	1,576.00	15,940.40
Kansas	0.00	4,036.40
Oklahoma	10,047.00	62,378.90
	13,135.40	112,332.00
Central Midwest		
Illinois	17,665.40	161,457.90
Kentucky	0.00	175.70
	17,665.40	161,633.60
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
	9,401.58	94,627.64

	OCTOBER	Year to Date
Rocky Mountain		
Colorado	902.90	2,439.00
Nevada	0.00	15.00
New Mexico	0.00	990.00
Wyoming	0.00	0.00
	902.90	3,444.00
Western III		
South Dakota	0.00	0.00
Arizona	3,627.70	13,884.30
	3,627.70	13,884.30
Northwest		
Idaho	0.00	1.50
Washington	910.00	34,694.80
Oregon	7,457.10	65,452.60
Utah	0.00	1,372.50
Alaska	0.00	40.00
Hawaii	0.00	2,598.00
Montana	0.00	38.20
	8,367.10	104,197.60
Unaligned		
Rhode Island	206.60	992.80
Vermont	1,528.20	7,236.90
New Hampshire	604.80	1,814.80
Maine	0.00	2,749.70
New York	7,647.13	55,797.93
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
	25,134.53	236,672.73
TOTAL:	213,939.66	1,446,283.18

**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.

the HLW Focus *of the Radioactive Exchange®*

(**HLW Bill** from pg. 1)
with key House Authorization Committee leaders -- Udall, Dingell, Sharp -- on the HLW bill provisions, as included in the Appropriations bill is now almost a dead issue.

Dingell Opposed to Playing Second Fiddle

At a December 2 meeting of the principals from both the House and Senate, Dingell challenged Johnston's proposal and plainly stated that he was "fundamently opposed" to any negotiation process where the Authorization House Committee Chairmen would be treated as second class citizens.

What Udall, Dingell and Sharp proposed was as an alternative process whereby nuclear waste issues would be dealt with in the conference on the Budget Reconciliation bill. The EXCHANGE has learned that the process proposed by the House leaders would involve having everyone's respective staffs work out a compromise on the issues, have the principals concur, then include the compromise proposal in the Senate version of the Reconciliation bill. Upon passage on the Senate it could then be acted upon by the House.

To start the process going Congressman Udall has forwarded a list of issues to the Senate staff. Though the EXCHANGE could not get direct confirmation the list did include issues from the Senate Environment and Public Works HLW legislation. This inclusion was not welcomed by the Energy staff.

Compromise on Key Issues Proffered

Though "process" issues seem to continue to dominate the discussions, there has been discussion of compromise proposals on some key issues -- Johnston's preferred site selection deadline of January 1, 1989, and the authorization of the MRS.

The EXCHANGE has been able to learn that House members voiced their strong opposition to the January 1, 1989 deadline, at the December 2 session. Johnston, facing this united front offered a proposal that would keep his '89 deadline for preferred site selection but would make it "revocable". The final selection would be made after completion of surface characterization at all three sites. No exploratory shaft would be sunk until the surface characterization work was done.

On the MRS there seems to be movement toward accepting some type of linkage that would assure that the MRS would not become a defacto repository.

Johnston Not Giving Up Easy

Though Senator Johnston is at this point participating in the negotiation process proposed by the House leaders, he has not given up trying to go to Conference with the House on the Energy and Water Appropriations bill (HR 2700) with his HLW legislation included. In response to a request from the Budget Committee for suggestion as to what should be included in the Senate Reconciliation bill, he has recommended the inclusion of HR 2700 as adopted by the Senate.

A New HLW Program for Christmas?

With the clock ticking down the final hours of the session, one would wonder whether such brinksmanship on the nuclear waste bill -- in the midst of giant battles over budget issues -- would doom the chances for legislation in the 100th Congress.

"Not likely," predicted one insider, "there'll be a bill -- but not 'til the last minute." **

NEVADA REFUTES DOE EFFORTS ON YUCCA MTN ENVIRONMENTAL STUDIES

A just-released report by the Nevada HLW Project Office contends that DOE has "failed to present the State of Nevada with a comprehensive, integrated plan for protecting the environment" while carrying out site characterization activities and possibly developing a HLW repository at the proposed Yucca Mountain site.

Because the inadequacy of DOE's efforts and the "piece-meal planning" of DOE's environmental program, the State argues that "DOE site characterization activities should be delayed until a comprehensive integrated environmental protection program can be incorporated into the Site Characterization Plan (SCP)." The DOE Nevada Project Office which reviewed the report prior to its public release, describes it as "not reflect[ing] current information on [DOE's] environmental program." However, in his letter to Nevada's Bob Loux, Carl Gertz, the DOE Nevada Project Officer, admits that the state could have concluded that the DOE environmental program was "piece-meal planning" since it did not have additional program documents being prepared by DOE, nor the time to review them. Gertz argues that Nevada, after reviewing these additional documents, will arrive at a different conclusion.

Summary of Nevada's Charges

The report -- "Environmental Program Planning For the Proposed HLW Repository at Yucca Mountain, Nevada," summarizes Nevada's key concerns as follows:

- Comprehensive site specific studies at Yucca Mountain were not performed for the environmental assessment, and that document cannot therefore serve in planning DOE environmental monitoring, mitigation, and compliance activities during site characterization and in resolving key environmental issues.

- DOE contends that the environmental baseline for the repository EIS begins only after site characterization is completed. DOE also contends that environmental studies are not needed for the SCP even though the NWPA Section 113(a) refers to the site characterization plan alternatively as an environmental assessment.

- The Environmental Management Monitoring Program (EMMP) proposed by DOE does not include monitoring activities that will be required to comply with environmental regulations. The draft plan also does not include reclamation measures for site characterization thus giving rise to concern that reclamation may be deferred until repository decommissioning or overlooked entirely.

- Components of the DOE environmental program are being planned in a manner that precludes coordinated and integrated review by the State. A comprehensive overview of the program has not been prepared by DOE and as a consequence the program risks being redundant or suffering omission.

- DOE has failed to include the repository siting project in DOE's ongoing environmental audit program currently being implemented by the Department Assistant Secretary For Environmental Health and Safety and has not provided substantive assurances to the State of Nevada that effective environmental surveys and auditing procedures will be carried out at the Yucca Mountain site.

Recommended Environmental Approach

In order to correct the shortcomings in the environmental program, the report recommends that DOE "establish a site specific pre-site characterization environmental survey, a reassessment of potential impacts, monitoring, mitigation and reclamation, and a sound environmental auditing procedure." **

LOW-CARBON STEEL CONTAINERS FOR HLW NOT RECOMMENDED BY EXPERTS

A panel of experts drawn together by Argonne National Laboratory, at DOE's request, for a workshop on alternative materials for a HLW package container, in September '86, "unanimously" concluded that "low-carbon steel cannot be recommended at this time as the container material" for HLW to be placed in the proposed national repository.

The conclusion was reached at the two-day workshop, and revealed, after the report was reviewed, in an October '87 Argonne National Laboratory Report "Container Materials For Isolation of Radioactive Waste in Salt " (ANL-EES-TM-339). The panel of experts included: Thomas Degnan, a professional engineer from Wilmington, DE; Thomas Devine of UC Berkeley's Material Science Engineering Dept.; Howard Pickering of Penn. State's Materials Engineering Dept.; John Scully from England's University of Leeds; Oliver Siebert, of Siebert Materials Engineering; and Michael Streicher, the panel chairman, from University of Delaware's Mechanical Engineering Dept.

Since low-carbon steel has been the primary focus for fabrication of the HLW package, this conclusion is of major significance to the current DOE-Battelle Salt Project Office emphasis on this material. It is in direct contrast to the findings of a recent Battelle publication -- "Expected Waste Package Performances For Nuclear Waste Repositories." (See EXCHANGE Vol. 6 No. 20). This document reports on Battelle's assessment of the performance a low-carbon steel HLW container package at seven proposed HLW sites in three geologic formations and concludes with the prediction that "waste package performance under expected conditions...at all seven sites are within regulatory requirements."

The Experts' Conclusions, Recommendations

Included in the Panel's conclusions and recommendations, as listed in their report Summary, are the following:

- "Because of the limited information available on service conditions in the actual salt repository environment over extended time periods it is necessary to assume that the very high corrosion rates measured at Pacific Northwest Laboratory (PNL) for steel in simulated high-magnesium brines will prevail. Additional information (such as data on the oxygen supply in the repository environment, hot-wall tests and microbiological corrosion, and weldment tests) is needed before a decision can be made on a container material. **Therefore, the panel agrees unanimously that low-carbon steel cannot be recommended at this time as the container material.**"

  "To qualify low-carbon steel for the container material, data are needed from new laboratory and field tests....In addition, more detailed data are needed on environmental characteristics and parameters (eg., temperature-time profiles, the effects of radiation on salt, and the presence of oxygen and other oxidizing species.)"

- "Inquiries of steel industry personnel indicate it is unlikely that containers can be cast from low-carbon steel with the required quality. Industrial facilities are available in the United States that can produce containers of wrought low-carbon steel by extrusion, therefore, future laboratory and field tests on low-carbon steel should be conducted using wrought (extruded) steel."

- "Testing of alternative materials (e.g. wrought Ni-Cr-Mo alloys [C-276, C-22, and 625] and Cu-30 Ni alloy should be initiated immediately."

- "Tests in the repository environment using full-size prototype containers that are heated and instrumented should begin as soon as possible. The purpose of these field tests is to obtain data on corrosion and near-field environmental changes caused by the presence of the hot container. The container should be retrieved intact to allow examination of

its surface and near-field environmental changes."

- o "Designs should be considered that separate the container from the salt environment, for example, by using a lime backfill or a cementlike encasement."

DOE Recognizes Problems

A DOE spokesman reported to the EXCHANGE that the Panel's recommendations, coupled with extensive studies that were completed over the past year, have had a significant impact on the proposed use of carbon steel HLW containers in an all brine environment. Testing of alternative materials is currently underway, as well as further testing of carbon steel. **

DOE FUNDS LEAGUE OF WOMEN VOTERS HLW EDUCATION PROGRAM

The League of Women Voters Education Fund (LWVEF) has received a grant of $274,287 for citizen education on nuclear waste issues from the US Department of Energy Office of Civilian Radioactive Waste Management (OCRWM). The LWVEF will use the grant to develop a teaching curriculum for a course of study on nuclear waste management. The curriculum, scheduled to be presented in two pilot workshops for community leaders and decision makers, will focus study on radioactive waste siting and the implementation of the Nuclear Waste Policy Act (NWPA) of 1982.

The LWVEF's proposal to carry out the project, a 19-month effort under way this month, was approved by OCRWM in September. The project's aim is to establish a framework for a course of study on nuclear waste issues while providing workshop participants with a better understanding of real-world waste policy decisions. In highly technical areas such as hydrogeology and treatment and storage of nuclear wastes, the LWVEF will contract with expert instructors to teach the pilot courses. At project's end, the LWVEF and DOE will assess the value of continuing to offer nuclear waste courses to citizens. **

REPORTS OF NOTE (HLW)

Rock Mechanics Models Evaluation Report (DOE/CH/46656-09); UDOE, OCRWM, Salt Repository Project Office. This report documents the evaluation fo the thermal and thermomechanical models and codes for repository subsurface design and for design constraint analysis. A separate review of salt creep models indicate that the commonly used exponential time law model is appropriate for use in repository design studies.

Shaft Siting Decision (DOE/CH/46656-08); UDOE, OCRWM, Salt Repository Project Office. The purpose of this study is to identify and establish relative guidelines to be used for siting of repository shafts. Weights were determined for the significant factors which impact the selection of shaft locations for a nuclear waste repository in salt. The study identified a total of 45 factors. A panel of experienced mining people utilized the Kepner-Tregoe (K-T) Decision Analysis Process to perform a structured evaluation of each significant shaft siting factor. The evaluation determined that 22 of the factors were absolute constraints and that the other 23 factors were desirable characteristics. The group established the relative weights for each of the 23 desirable characteristics by using a paired comparison method. **

IN WASHINGTON STATE

Representatives of the **Yakima Indian Nation** and other tribes and bands conducted a religious ceremony at Gable Mountain on the Hanford Nuclear Reservation earlier this month. The mountain is 5 miles northeast of the proposed site for the Hanford HLW repository exploratory shaft. The site of the ceremony is of religious significance for Indians of the Columbia river basin region. This marked the first time, since the reservation was created by the President of the United States, using the War Powers Act in 1943, that the Yakimas had access to Gable Mountain for a religious ceremony. In attendance were about 25 members and guests of the Yakima Nation, the Wanapum Band, (a band of Yakimas, and the Umatilla Tribe. Three non-Indians served as witnesses to this event, including two representatives from the U.S. Department of Energy (DOE). DOE's decision to authorize access came about as a result of meetings with the Yakimas on cultural resource studies related to the HLW repository and proposed modification to DOE's near surface test facility situated in the mountain.

In June 1987, DOE made several archaeological finds on Gable Mountain and sought advice from the Yakimas on their significance. The Yakimas indicated to DOE that the area was a sacred site for the Nation that had been used for thousands of years. The Yakimas then formally requested access to the Gable Mountain site for the religious ceremony.

The Yakima Indians hope to reaffirm their perpetual rights to freedom of worship on the mountain and establish reasonable access to the site. Gable Mountain is viewed as one sacred site in particular need of restoration. DOE has not indicated whether continuous access would be approved, but the fact that officials did work out this unique opportunity for the Tribe may indicate that the department is becoming more sensitive to both history and cultural aspects of the area.

AT THE NRC

On November 19 and 20 the Nuclear Regulatory Commission's Licensing Support System (LSS) Negotiation Group, established to prepare a Draft Rule held its first real bargaining session. Two previous meetings were spent in developing committee procedures. At this November session the group agreed to add a seat at the negotiating table for interested local governments. Steve Bradhurst was there to represent Nye County, Nevada: a coalition of Southern Nevada local governments; the Mid-Columbia Consortium of Governments from the Hanford area of Washington State, and Deaf Smith County, Texas.

DOE reported that they have put about 10 million pages of base records on microfilm and have another 10 million pages of backlog. They estimate that there may be a total of some 35 million pages and data that could be tied to the licensing process by 1995. An analysis of the costs associated with this effort is currently underway. A ball-park figure of $86-100 million was mentioned with the possibility of another 6 million being added to include the base information from the three potential sites. DOE officials emphasized that over $600 million could be saved if the licensing process took three years as opposed to five.

It was reported that a contract had been signed with Science Applications International of McLean, Virginia to design and implement the LSS. The contract is for three years and with a value of $5.3 million. According to DOE's schedule, a draft concept feasibility report will be available on April 1, 1988 and a system design with specifications on October 1, 1988.

Several preliminary issues were examined by the Group at the meeting including: What are the objectives of the LSS? What are the objectives of the proposed NRC rule? What types of rule changes are needed to accomodate the LSS? When will the NRC have jurisdiction over the DOE or other parties? How do the NRC rule-making and current DOE LSS efforts relate to one

another? What are some of the alternatives to the LSS (full text search and retrieval system) that will accomplish the same objectives? What are the costs-/benefits of the LSS and alternatives.

Industry members challenged the entire LSS concept by saying that a considerable amount of money might be saved just by warehousing information rather than trying to create an elaborate electronic reference system that may be prohibitively expensive. As one utility representative commented, "a lower tech system will meet the needs. You could buy an airline with the gold-plated system being contemplated."

Members of the Group voiced concern about how it will be able to monitor and influence the DOE work under the recently awarded contract. DOE was encouraged to provide on-going liaison so that the Group may determine whether its objectives are being met and whether they are feasible. State representatives emphasized that the underlying motive for the LSS was to facilitate meaningful participation in the licensing process. There appears to be an emerging difference in approach between the states, tribes, and environmentalists on one hand and utilities on the other. The latter is moving towards support of a full text system and a comprehensive LSS, while the latter is characterizing the LSS as unnecessarily expensive and too time-consuming to implement. Negotiations will continue on December 14-15, in Washington D.C. **

REPORTS OF NOTE (HLW)

Subsurface Quality Assurance Practices (DOE/CH/46656-07); UDOE, OCRWM; Salt Repository Project Office. This report addresses only the concept of applying Nuclear Quality Assurance (NQA) practices to repository shaft and subsurface design and construction; how NQA will be applied; and the level of detail required in the documentation for construction of a shaft and subsurface repository in contrast to the level of detail required in the documentation for construction of a traditional mine. The review of gassy mine regulations and repository design codes, standards, and regulations are the subject of additional studies and as such addressed in separate reports. This study determined that NQA practices are viable, attainable, as well as required. The study identified the appropriate NQA criteria and the repository's major structures, systems, items, and activities to which the criteria are applicable. A QA plan, for design and construction, and a list of documentation, for construction, are presented.

Exploratory Shaft Facility Quality Assurance Impact Evaluation (DOE/CH/46656-10); UDOE, OCRWM; Salt Repository Project Office. This report addresses the impact on the nuclear waste repository in salt of the suitability of the quality assurance practices used for the Exploratory Shaft Facility (ESF) design, and construction in licensing as part of the repository. It identifies the QA practices necessary for ESF design and construction licensability. A review and evaluation of the QA practices in use, and proposed, for ESF design and construction resulted in the following conclusions. The suitability of QA practices, as documented and used for ESF design activities, were found to be acceptable with a few exceptions. The suitability of QA practices for construction activities were found to be insufficiently documented in implementing procedures at this time to allow a full and effective evaluation for licensing purposes. Recommendations are provided for mitigating impacts to ensure compatibility of the QA practices used in ESF activities with those considered necessary for repository licensing.

Calendar

December

1-3 Short Course: Packaging and Transportation of Radioactive Waste Material; emphasizes "hands on" skills in dealing with regulatory compliance, techniques and procedures and disposal facility requirements. Las Vegas, NV; Fee: $525.00 (includes a tour of a LLRW disposal facility); Contact: Peggy Thompson, US Ecology Nuclear, 9200 Shelbyville Road, Suite 300, Louisville, KY 40222; (800) 626-5334.

1-3 Meeting: OCRWM; Institutional Socioeconomic Coordinating Group; Las Vegas, NV; Contact Barry Gale (202) 586-1116.

4 Meeting: Rocky Mtn Compact Board; Mt. Charleston Inn Hotel, 2 Kyle Canyon Road, Mt. Charleston, Nevada; Contact: (303) 825-1912

8 Meeting: Central Compact Commission, Marriott Hotel, 775 Brasilia Avenue, Kansas City, Missouri, Contact: Ray Peery (404) 261-7114.

8-9 Conference: IL Department of Nuclear Safety's Fourth Annual Low-Level Radioactive Waste Generators' Conference; Ambassador West Hotel,Chicago, IL; Contact: IL Department of Nuclear Safety, Office of Environmental Safe,, (217) 785-9958

15 **Open Meeting: National Academy of Sciences Radioactive Waste Review Board; AMFAC Hotel Alburqueque, New Mexico.**

13-17 Meeting: HPS Topical Meeting, Miami Beach, FL; Contact: R.J. Burk Jr., Health Physics Society, 8000 West Park Drive, Suite 400, McLean, VA 22102.

17 **Public Hearing; Illinois Department of Nuclear Safety; Subject: Proposed rules on Requirements For The Diposal Of Low-Level Radioactive Waste Away From The Point Of Generation; Springfield, Illinois, Room 118 of the State Capitol Building at 10:00 a.m., Contact: Betsy Salus, Staff Counsel, Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, IL 62704, (217) 785-9880.**

1988

January

8 **DEADLINE: Proposal Submission: MidWest Compact General Support Contract, Contact: Greg Larson (612) 293-0126**

15 DEADLINE: Proposal Submission; DOE-OCRWM; Super Gorilla Integrator Contract

26-28 **Workshop: LLRW Packaging, Transportation and Disposal, Sheraton Charleston Hotel, Charleston, S.C.; Spons. Chem-Nuclear Systems, Inc. Contact: Tammi Pennington (803) 256-0450.**

February-March

1-5 Short Course: BRC RADWASTE DISPOSAL; Spons: Depts. of Mechanical Engineering & Civil Engineering, University of Texas at Austin; Joe C. Thompson Conference Center; Fee: $695 Contact: (512) 471-3506.

22-24 **Workshop: LLRW Packaging, Transportation and Disposal, Sheraton Charleston Hotel, Charleston, S.C.; Spons. Chem-Nuclear Systems, Inc.; Contact: Tammi Pennington (803) 256-0450.**

28-3 Meeting: Waste Management '88, Tucson, AZ; Contact: Mort Wacks, Dept. of Nuclear Engineering, University of Arizona, Tucson, AZ 85721.

May

3-6 Conference: International Conference On Incineration of Hazardous & LLRW; San Francisco, CA; Contact: Jim Tripodes (714) 856-6200

17-19 **Workshop: LLRW Packaging, Transportation and Disposal, Sheraton Charleston Hotel, Charleston, S.C. Spons. Chem-Nuclear Systems, Inc., Contact: Tammi Pennington (803) 256-0450.**

CONTRACT AWARD: OCRWM Super Gorilla Contract.

July

4-8 Meeting: HPS Meeting, Boston, MA; Contact: R.J. Burk Jr., Health Physics Society, 8000 West Park Drive, Suite 400, McLean, VA 22102.

(Changes from previous calendar in bold print)

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