
The

Radioactive Exchange®

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

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Volume 6 No. 6

March 31, 1987 (Released April 8)

CONGRESS ATTEMPTS TO "RIGHT" THE HLW PROGRAM WITH "BUY OUTS", REGIONAL MRS, AND WHATEVER ELSE...

A Publisher's Perspective - - - Over the past weeks actions taken by various Congressional committees and individual members of the US Senate and House of Representatives clearly demonstrate that there is little, if any, confidence in the HLW program succeeding within the confines of the Nuclear Waste Policy Act (NWSA). Senator Bennett has followed initial support of Luther Carter's "buying out" Nevada approach (See EXCHANGE, Vol. 6, No. 4) with a bill that would amend the NWSA to do just that. A former National Academy of Sciences Radioactive Waste Board member, testifying at Congresswoman Marilyn Lloyd's recent Subcommittee hearing, lent his personal support to the Nevada "buy out", noting that to his knowledge Nevada was a technically sound site. His testimony apparently provided sufficient "technical justification" to support what had to be the inclination of the members to publicly endorse a Nevada "buy out" (See story this issue). (See **Perspective in the HLW Focus**)

US ECOLOGY, WESTINGHOUSE SUBMIT PROPOSALS FOR CS LLRW FACILITY

Only two firms -- Westinghouse and US Ecology -- met the April 1 deadline for submitting proposals to develop a regional disposal facility for the Central States Compact region. Complete copies of the proposals are available for review at the appropriate Central states' agency offices. Proposal Executive Summaries may be available from US Ecology in Louisville (800) 626-5334, or Westinghouse (412) 722-5531.

Neither proposal names the host state or a site where the regional disposal facility would be located.

No SLB Facility

Both proposals are based on engineered disposal facility concepts. Westinghouse's is based on their SUREPAK concrete containerization concept and in most respects is similar to the proposal submitted by Westinghouse-Hittman to the State of California in 1985. (See **Proposals** pg. 2)

(Proposals from pg. 1)

US Ecology, for the first time in a formal proposal, revealed their concept for an engineered burial facility. Their proposal allows for the development of three different possible facility designs, one a split grade facility and two others that are above-grade. One of the above-grade designs is similar to the 30 year long term storage facility developed by Ontario-Hydro that would allow continuous monitoring, and incorporating a "cap" to achieve permanent disposal. The other is an above-grade bunker incorporating interlocking concrete containers designed by Bechtel.

The split-grade facility is patterned after the earth-mounded concrete bunker concept being utilized by the French and, again, incorporates the Bechtel interlocking containers.

Bechtel is the designated engineering firm in the proposal and together with US Ecology is responsible for the three proposed site designs. US Ecology states in the proposal that final selection of the facility design would be made after receiving state and local input. The Central States Commission has scheduled the final selection of a contractor for July 1, 1987. **

VIRGINIA POWER AWARDS JGC \$80 MILLION CONTRACT FOR ONSITE LLRW TREATMENT

During the past few weeks, Virginia Power, after a year or so of studying LLRW processing systems being utilized around the world, awarded an \$80 million contract to JGC Corporation of Japan to develop total onsite LLRW processing systems at the utility's North Anna and Surrey reactor facilities. J. A. Jones is to be construction engineer and NUS is to provide engineering consultant services. JGC is completely responsible for the development of the LLRW processing system.

Supercompactors, Bitumen Solidification

Under the contract JGC is responsible for putting in place a LLRW processing system at each reactor station. The system is to

include supercompaction, dewatering, solidification via a bitumen process, and laundering. Though the system does not include an incinerator, the stand-alone facility that will house the LLRW equipment is to be designed to allow an incinerator to be back-fitted.

70% of Award to American Firms

Under the terms of the contract JGC is to spend seventy percent of the award for American manufactured equipment or American based expertise. No decisions have been made regarding the purchase of the necessary processing equipment. Specifications are now being finalized with the intention to begin issuing Request for Bids in May of this year. **

SE COMMISSION AGREES ON COMPACT CHANGES TO KEEP NORTH CAROLINA IN

At their March 26 meeting following months of negotiations and discussions, the Southeast Compact Commission members adopted a policy resolution requesting that their respective state legislatures amend the SE LLRW compact agreement to satisfy the concerns voiced by North Carolina officials when that state was selected as the host for the second SE regional disposal facility. The proposed changes limit the time period a host state would be required to operate a disposal facility and set a time period for withdrawal of a party state upon the beginning of operation of the second regional disposal facility.

20 Year Limit For Host State

To allay North Carolina's concern that once it becomes the host for a disposal facility it would remain so forever, the Commission amended the Regional Management Plan and recommended that their legislatures adopt a change to the SE Compact stating that: "No party state shall be required to operate a regional facility longer than a 20-year period or to dispose of more than 32,000,000 cubic feet of low-level radioactive waste, whichever event occurs first."

In order to protect a host state from being forced to continue to serve in that capacity

because party states designated to host a disposal facility in the future withdrew, the Commission recommended that the Compact language be amended to read as follows: "The right of a party state to withdraw ...shall terminate no later than 5 years following the commencement of operation of the second host state disposal facility. Thereafter a party state may withdraw only with the unanimous approval of the Commission and with the affirmative consent of Congress." **

S. CAROLINA ISSUES GUIDE TO DETERMINE COMPLIANCE WITH '88 LLRWPA MILESTONE

Within the past week the South Carolina Department of Health and Environmental Control, on behalf of the State Board of Health and Environmental Control, issued the "Guidance" that will be used by the Board to determine State and Compact compliance with the 1988 milestone of the Low-Level Radioactive Waste Policy Act Amendments. This milestone requires that by January 1, 1988 each compact region without a LLRW burial facility identify a host state, or if they are an unaffiliated state select a site for a disposal facility and, that the selected host state, or compact or unaffiliated state, develop a siting plan including a schedule for constructing a facility and preparing a license application.

The Guidance document plainly states that upon determining non-compliance the Board will impose the penalties allowed under the law.

Details On Specific Requirements

Though at Waste Management '87 sited state officials explained that the key basis upon which compliance with the 1988 milestone will be determined would be "sincerity of effort" (See EXCHANGE, Vol. 6, No. 5), the SC Board sets out rather specific requirements that will need to be included in host state or compact siting plans. The Guidance breaks down the requirements into three separate areas: host state identification; siting plans, and delegation of authority.

Legal documents must be submitted to prove host state identification. With respect to the "siting plans" and "delegation of authority" requirements, host states or compacts must submit information that includes the following:

Siting Plan: At a minimum a siting plan should provide a description of the elements described in the LLRWPA, with sufficient explanation that would allow the "executing agency ability to implement the plan."

If the plan is found to provide "too little guidance...to have [no] practical effect in accomplishing the goal of establishing a disposal facility" within the timetable specified in the LLRWPA, the plan can be found out of compliance.

In the event that a siting plan does not demonstrate a sequence of tasks that will allow the responsible agency to submit a license application by January 1, 1990, the siting plan must indicate that the Governor of each state in the region will submit a certification to the NRC indicating that each will be capable of providing for, and will provide for, the storage, disposal, or management of any LLRW requiring disposal after December 31, 1992, as required.

In the event that a siting plan does not demonstrate a sequence of tasks that will allow the responsible agency to begin operation of a disposal facility by December 31, 1992, the siting plan must indicate that the region or each state in the region after December 31, 1992, will store, dispose or manage all applicable LLRW generated within its borders.

Delegation of Authority The SC Board intends to place "particular emphasis on the demonstration of the legal chains of authority that will drive successful and smooth implementation of the [siting] plan.

"Agencies submitting siting plans must submit a statement by specific legal reference and certified by the Governor of the State or the State Attorney General, showing their authority for submitting such plan on behalf of the state."

"A list of citations showing legal authorities to perform the various activities described in the plan, by itself, will not be considered a 'siting plan.' The plan must either identify a lead agency that will take responsibility for coordinating the implementation of the various activities, or there must be a mandate binding each of the agencies involved in each of the activities to perform the activity in accordance with goals and schedules in the plan."

"In the case of a compact that submits a siting plan that is to be implemented by the compact, the compact must demonstrate that it has clear and specific legal authority to implement each activity in the plan within the state identified as host."

For a complete copy of the Guidance document write: Heyward Shealy, SC DHEC, 2600 Bull Street, Columbia, SC 29201. **

REQUEST FOR PROPOSALS

State of California Department of Health

LLRW Disposal Site Selection Process Review (RFP-87-018): The CA Department of Health is requesting proposals from technical contractors capable of reviewing the data produced by US Ecology and their contractors during the LLRW disposal site characterization process, and also assisting the Dept. of Health in developing site licensing guidance. CONTRACT VALUE: approximately \$100,000; PROPOSAL DEADLINE: April 30, 1987; AWARD DATE: July 15, 1987; CONTACT: Reuben Junkert (916) 323-3021.

LLRW Disposal Enhanced Technology Evaluation (RFP-87-019): The CA Department of Health is requesting proposals from an outside contractor capable of evaluating enhancements to shallow land burial and alternative disposal technologies for LLRW. Evaluation is to include an analysis of the cost effectiveness of the technologies. CONTRACT VALUE: \$225,000. PROPOSAL DEADLINE: April 30, 1987. AWARD DATE: July 15, 1987. CONTACT: Reuben Junkert (916) 323-3021.

LLRW Disposal Site Environmental Impact Report and Environment Impact Statement (RFP-87-020) (TO BE RELEASED BY MAY 1): The Dept. of Health will be issuing this RFP seeking contractors capable of completing a LLRW disposal site Environmental Impact Report/Statement upon US Ecology's submission of a license application to the State for the selected site. Request for Proposal not yet issued.

LLRW Volume Disposal Update

LLRW ACCEPTED FOR DISPOSAL AT BARNWELL, BEATTY AND HANFORD

Through February 1987

(Volumes in Cubic Feet)

	<u>February</u>	<u>Year to Date</u>		<u>February</u>	<u>Year to Date</u>
Northeast			Rocky Mountain		
Connecticut	3,879.50	6,054.40	Colorado	0.00	0.00
New Jersey	1,685.00	2,408.20	Nevada	0.00	0.00
	<u>5,564.50</u>	<u>8,462.60</u>	New Mexico	0.00	0.00
			Wyoming	0.00	0.00
				<u>0.00</u>	<u>0.00</u>
Appalachian			Western III		
Pennsylvania	6,988.40	15,052.90	South Dakota	0.00	0.00
West Virginia	0.00	0.00	Arizona	0.00	0.00
Maryland	1,222.00	1,222.00		<u>0.00</u>	<u>0.00</u>
Delaware	150.00	150.00			
	<u>8,360.40</u>	<u>16,424.90</u>			
Southeast			Northwest		
Georgia	2,974.00	3,887.00	Idaho	0.00	0.00
Florida	4,963.50	17,310.70	Washington	4,477.90	10,935.90
Tennessee	13,523.90	21,668.30	Oregon	6,389.20	14,755.40
Alabama	3,903.60	8,930.10	Utah	0.00	0.00
N. Carolina	5,214.00	11,905.80	Alaska	0.00	0.00
S. Carolina	10,719.70	17,578.30	Hawaii	0.00	573.80
Mississippi	988.00	2,754.00	Montana	0.00	0.00
Virginia	3,807.30	5,862.40		<u>10,867.10</u>	<u>26,265.10</u>
	<u>46,094.00</u>	<u>89,896.60</u>			
Central States			Unaligned		
Arkansas	0.00	0.00	Rhode Island	58.10	172.20
Louisiana	2,985.00	4,537.00	Vermont	440.50	440.50
Nebraska	2,412.00	5,771.00	New Hampshire	345.00	367.50
Kansas	1,092.00	1,714.50	Maine	45.00	45.00
Oklahoma	3,967.50	11,535.00	New York	6,159.10	8,039.80
	<u>10,456.50</u>	<u>23,557.50</u>	Massachusetts	3,783.40	6,073.20
			Texas	0.00	0.00
			North Dakota	0.00	0.00
Central Midwest			California	7,411.70	13,385.30
Illinois	14,093.00	31,923.40	Puerto Rico	0.00	0.00
Kentucky	124.20	124.20	D.C.	0.00	0.00
	<u>14,217.20</u>	<u>32,047.60</u>		<u>18,242.80</u>	<u>28,523.50</u>
Midwest			TOTAL:	123,859.40	252,539.80
Wisconsin	1,260.50	1,436.50			
Indiana	1,278.00	1,278.00	(As reported 2/15/87)		
Iowa	489.00	1,840.00	JANUARY:	128,680.40	128,680.40
Ohio	1,648.00	2,646.00			
Michigan	2,733.00	3,652.50			
Minnesota	2,648.40	3,911.20			
Missouri	0.00	12,597.80			
	<u>10,056.90</u>	<u>27,362.00</u>			

Wrap Up (LLRW)

IN NEW ENGLAND

A bill to establish the **Maine** LLRW Authority has been introduced in that State's legislature by Senator Kany and cosponsored by State Representatives Mitchell, Holloway and Coles. A public hearing was held on March 20.

IN THE SOUTHEAST

At an early April session of the **North Carolina Legislature's Committee on Water and Air Resources** Chaired by Representative Dan Devane, the NC House bill to rescind the state's membership in the Southeast Compact was referred back to subcommittee at the request of the bill's sponsor, Representative Joe Mavretic. Though Rep. Mavretic's reasons are not entirely clear the Subcommittee was requested thereafter to look into the cost implications of North Carolina going it alone. It was pointed out to the EXCHANGE that this action should not be construed as an attempt to kill the bill. Representative Mavretic, as sponsor, is definitely interested in pursuing the bill's passage, as are others in the House. There is no companion bill in the Senate. Public hearings on the House measure were held on March 25.

A "new" legal analysis has been presented to NC state officials regarding the ongoing discussion of North Carolina pulling out of the Compact, going it alone, and developing a state-only burial facility. The memo argues that a state-use-only disposal facility may not be legally viable. From what the EXCHANGE has learned the legal analysis argues **against** the view that a state could develop a LLRW disposal facility and prohibit out-of-state use of such a facility even if it met the Court's definition of being a "market participant." Copies of the analysis may be available from the SE Compact Commission. Contact: Kathy Visocki at (919) 781-5128. **

IN THE CENTRAL MIDWEST

Governor James R. Thompson is proposing a 73 percent increase in appropriations for the **Illinois** Department of Nuclear Safety (IDNS). Much of the increase is in the

areas of nuclear power plant monitoring and low-level radioactive waste management. More than half of the increase is due to a recommended increase in appropriations from the Low-Level Radioactive Waste Fund, from \$1.9 million to \$10.6 million. LLRW generators pay fees into this fund. The appropriation increase reflects an increase of fees that will be assessed on generators of LLRW. In FY 88, the IDNS will begin detailed characterization of four alternative sites for such a facility in FY 88, at an approximate cost of \$2 million per site.

IN THE CENTRAL STATES

Though the **Arkansas** legislature adjourned this past Friday, April 3, without taking any precipitous action regarding the Central States Compact, legislative and executive activity has far from ceased in Kansas and Nebraska.

Ever since **Kansas** came out top-ranked as a possible host for the regional LLRW facility, the reports received at the EXCHANGE seem to indicate that the entire population of the state has made it their top concern. At a March 18 public meeting on the Compact Phase II Siting Study, an auditorium with a 2,700 person capacity couldn't accommodate the attendees. Crowds assembled outside to hear CS Executive Director Peery describe the study. At a scheduled April 2 session of the State's Senate Energy and Natural Resources Committee to discuss three pending bills dealing with LLRW and the CS Compact, the Committee room was jammed packed with spectators (or as described by some "demonstrators") against putting any LLRW disposal facility in the state.

At the April 2 session the Committee: amended a bill proposing to prohibit shallow-land burial providing that the legislature must approve any proposal to build a below-grade disposal facility; directed that a bill proposing to establish a state LLRW disposal facility program be prepared to be sent to the floor; and, though not taking any final action on a bill to rescind the state's membership in the central States Compact, acted procedurally to allow the possibility that the legislature

could meet in "Emergency Session" this summer after adjourning from the regular session to consider the measure.

What is startling (and reflective of the intense public reaction against the possibility of having a LLRW disposal facility in the state) is that an Emergency Session just to consider the compact membership bill is thought to be a real possibility.

Following this session, on April 6, Kansas Governor Mike Hayden announced that he was appointing a committee of state experts to study the LLRW disposal issue with the directive that they report back by the end of April. This would be after the regular session adjourns, enhancing the probability that the Kansas legislature will meet in an Emergency Session this summer to consider just how it will deal with the Compact membership and the possibility of hosting a LLRW disposal facility.

In **Nebraska** the action is not as heated as Kansas. Further legislative movement is somewhat on hold while a twenty-two member study commission appointed by the Governor studies the LLRW disposal issue and considers membership in the CS Compact.

IN THE EPA AND NRC

The EPA and NRC have reached agreement on **joint locational guidance** for LLRW burial facilities. The eleven point list of guidelines should appear in the **Federal Register** within the coming weeks. The objective of the "guidance" is to allow states sufficient information to develop siting plans for LLRW disposal facilities to meet the LLRWPA 1988 site-plan milestone. Of the eleven guidance points, ten reflect NRC siting requirements ala 10CFR Part 61, the eleventh, EPA's responsibility for protecting vulnerable groundwater.

The EXCHANGE has been informed that the two agencies are also very close to agreeing on a **joint guidance for facility design criteria** for LLRW burial facilities. The design that both agencies have settled on is similar to that of a modified tumulus facility. This guidance should be released

in four to six weeks.

IN THE INDUSTRY

Arkansas Power & Light is the eleventh U.S. utility to contract with **Duratek Corporation** for their portable sluiceable EVR Processing System. This compact system is designed for easy operation and low operator exposure (ALARA). Its unique design and quality fabrication make it a low-maintenance alternative to in-plant equipment. Use of the system with the Durasil exchangers will substantially cut waste volumes and operations costs for Arkansas Power & Light Company.

WasteChem Corporation has completed a total upgrade of a high temperature, two-stage hazardous waste incinerator. The incinerator, owned and operated by Stablex South Carolina, Inc. of Rock Hill, SC, destroys chlorinated and non-chlorinated organic wastes. The incinerator upgrade project included complete replacement of the off-gas scrubber system and waste heat boiler, modification of the incinerator internals, and a total revision of the incinerator controls. The incinerator has recently concluded a series of monitored test burns. All effluent streams were in compliance with regulatory guidelines, and Stablex South Carolina has notified the U.S. Environmental Protection Agency and the South Carolina Department of Health and Environmental Control that it is prepared to conduct formal trial burns. Stablex expects to receive its RCRA Part B license in the near future. The incinerator will continue to operate under a Part A license in the interim.

International Technology Corporation (IT) of Torrance, CA, and **Fluor Daniel**, a unit of Fluor Corporation of Irvine, CA, announced that they have entered into a long-term worldwide teaming arrangement to provide on-site treatment and disposal services to generators of hazardous waste.

International Technology Corporation (IT) has acquired **Delian Corporation** in a pooling-of-interests transaction. Delian, with annual sales of about \$6 million and 48 employees, provides risk and resource

management services to the nuclear utility industry. The company is headquartered near Pittsburgh, PA and has offices in Washington, D.C., Idaho Falls, Idaho, and San Jose and San Diego, California.

Babcock & Wilcox Nuclear Power Division has signed a distribution agreement with **Fluid Tech, Inc.** of Las Vegas, Nev., to distribute that company's low-level liquid radwaste solidification media on an exclusive basis in the Eastern U.S. Fluid Tech's solidification media offerings include four dry powder products -- Aquaset, Aquaset II, Petroset, and Petroset II -- which individually or blended together solidify most forms of wet low-level radioactive waste, including oils, solvents, sludges, resins, antifreeze, alcohols, treated acids and bases, evaporator concentrates, and decon solutions.

Aquaset is a water-activated, granular solidification agent for aqueous liquids containing small amounts of dissolved and suspended solids, detergents, chelating agents, resins and organics. Aquaset II solidifies aqueous solutions that are extremely high in dissolved solids such as neutralized acids and bases as well as water soluble or miscible organic liquids.

Petroset and Petroset II can be used in combination for liquid radwaste mixtures of water and organics such as oils and solvents. Petroset II solidifies water-free waste fluids such as oils. The solidified radwaste is acceptable for

disposal at the Hanford, WA, and Beatty, NV, disposal sites.

Chem-Nuclear Systems, Inc. has been awarded a full service contract for waste processing and transportation at Detroit Edison's Fermi 2 plant. Services started on March 1, with Chem-Nuclear's RDS-1000 (Rapid Dewatering System) being used as the prime processing technique. Future processing plans include use of Chem-Nuclear's 21-300 (322 cu.ft.) liner.

ON THE MOVE

Dinkar P. Kharkar, Ph.D., a specialist in radiochemical studies for nuclear and mixed hazardous waste projects has joined The Earth Technology Corporation. Kharkar has been involved in nuclear projects for the European Nuclear Energy, Brookhaven National Laboratory, and U.S. Department of Energy.

Jack O. Vance, a Director of McKinsey and Company, Inc., has been elected a Director of International Technology Corporation (IT).

Russell C. Brown has joined ICF Incorporated as a vice president. As vice president Brown will work closely with ICF's energy clients, particularly electric utilities. Prior to joining ICF, Brown was senior vice president of the Management Analysis Company (MAC), a San Diego based consulting firm.

REQUEST FOR PROPOSALS

Washington State Department of Ecology

The Washington State Department of Ecology invites those qualified to submit proposals to review and discuss the extent of possible bodily injury and property damage to third parties and of possible environmental impairment presented by the state licensed possession and use of radioactive materials and by the generation, handling, transportation and disposal at the Hanford facility of LLRW. Costs associated with possible occurrences (accident and incidents) must also be developed. Demonstrated knowledge and/or experience required in environmental economics, engineering, radiation health physics, hydrology and in performing risk assessments or hazard evaluations. Project length: Four weeks. Budget to \$50,000. Minority and Women's businesses are encouraged to apply. Call (206) 459-6228 for RFP. Proposal deadline: 4/30/87.

the HLW Focus

of the Radioactive Exchange®

(Perspective from pg. 1)

In the meantime, while all of this "If the Price is Right a State will take a Repository" thinking was going on, Senator Evans, McClure, Brock Adams and Representative Morrison, started talking about Regional Monitored Retrievable Storage facilities (in other words, going back to the concept of AFR's). Senator Evans explains that regional MRS's would ensure regional equity. In his view Washington may be willing to do its share by being the regional MRS for "Defense wastes" if this would speed up the cleanup of the HLW waste already at the facility. Senator McClure implies that Idaho might be interested in a regional MRS as long as there was more than one. (Possibly, we may even hear from Illinois, who has been lobbying intensely for the Supercollider. Perhaps Illinois should offer the Morris facility as the site for an MRS in exchange for getting the Supercollider. The silly season is on.)

Meanwhile DOE, who in past years has adamantly defended the NWPAs as one of Congress' greatest achievements, advising that it should be left alone and it will succeed, has had their collective head turned by this attractive way to get out from under all the criticism from the states and begin to be viewed as "St. Nick" carrying gifts rather than as the Angel of Death carrying the plague and pestilence.

If this all sounds a little crazy and more than a little shameful, it should. Mr. Rusche's glorification of the NWPAs over the past year or so may have been more politically motivated than not, but his statements were indeed a reasonable assessment of what the Congress achieved when it adopted the law. It was not easy. It took the leadership of the best statesmen

on the Hill to get it done. Financial incentives were considered and left out because it was felt then, and it remains true today, that the HLW repository location must be decided in a manner that maximizes national public health and safety and environmental protection. Putting the facility in a site less qualified than another because a host state decided to take "the risk, given the financial incentive," could lead to a national catastrophe that would end up in the taxpayer's lap. Those leaders in Congress that crafted the NWPAs perceived this possibility and rightly decided against offering the apple to a willing Eve. Where are those leaders today?

Most assuredly a host for a HLW repository or an MRS may be accepting a national responsibility that is far beyond the benefits derived from the facility itself or the nuclear generated electricity. There should be compensation for taking on this responsibility. But the compensation cannot be the motivation to accept the risk.

If compensation shades the site decision, and the risk that is allowed to be accepted by a willing host is beyond what should be technically and scientifically acceptable, it is the nation, the general public, the fifty states that will pay the price.

Deciding on the single site approach at this stage of the game -- prior to characterization -- could mean spending \$750 million on characterizing a site and then discovering a technical problem. What happens then? Would the powers that be then decide to go to another site and restart, or would the expenditure of \$750 million, plus the time delay, plus the fact that the host may have been bought out and getting \$50 million a year, sway the system

to "engineer" around the problem or, worse yet, overlook it?

It is noteworthy that it took almost seven years to legislate a process to site a HLW repository. Now within a week or so actions are proposed to throw it all out the window for a quick fix, finding a sacrificial lamb. The nuclear industry can't afford it, the nation can't afford it, and the public can't afford it.

Everyone knew it wasn't going to be easy and it isn't. But as Harry Truman said, "If you can't stand the heat, get out of the kitchen." The heat was expected so why the fuss. DOE shouldn't be trying to escape but should be in there fighting, as it has been, for the integrity of the Act and the siting process.

The nuclear industry won't be in any trouble if the repository is not in operation in 2003 or 2010 for that matter.

What is it going to take to get on with it? Continuing through the process honestly, credibly. Not looking to get away from the heat but taking it head on. DOE shouldn't look at the program as theirs. It isn't. They should be acting on behalf of the national interest.

The states, on the other hand, need to continue to aggressively, even adversarially, questioning DOE activities and studies. After all, it is the states that are responsible for protecting the public's health and safety. But the state leaders as part of this United System must also recognize their national responsibility. If a site in Texas is better, safer than one in Illinois, or one in Nevada safer than one in Michigan, then it behooves each to recognize the necessity to serve for the betterment of all. In the end it serves the individual interest of each.

If there are any changes in the NWPA process to be made it is in the schedule, in the implementation, and, possibly, in the manner in which spent fuel being generated is held prior to permanent disposal.

The concept of using an MRS as halfway

house or backup for a permanent repository is sound and needs to be resurrected. But, maybe it is even unnecessary. Some utilities seem to be of this mind. A real alternative would be to provide utilities "compensation" from the Nuclear Waste Trust Fund for storing their spent fuel on site, according to DOE packaging regulations, so it would be ready to be directly transported to a repository when it opened. For utilities that could not do so, provide a federal storage facility.

The schedule needs to be set based on sound technical projections of the time necessary to assure finding a safe site. Though regional equity -- siting an Eastern and Western repository knit the final political compromise on NWPA -- that idea may indeed need to be forgotten with equity achieved by the nuclear-powered states taking the responsibility for long term storage in some manner, and when a site is technically decided upon, paying the host for taking the responsibility.

With regard to putting creditability back into the implementation of the program, why not drag the National Academy of Sciences directly into the process? Why should they stand aside, being drawn on when DOE decides. These proposals need to be discussed, not bribes. **

JOHNSTON, McCLURE SPONSOR BILL TO "BUY" HOST MRS REPOSITORY STATES

Following up quite quickly on his inclination that a positive "financial incentive package" might entice states to host a HLW repository and possibly even a Monitored Retrieval Storage (MRS) facility (See EXCHANGE, Vol. 5, No. 4), Senator Bennett Johnston, Chairman of the Energy and Resources Committee, introduced legislation (S. 839) that would do just that -- provide a "pot of gold" in exchange for a "pot of nuclear waste" (thereby ending the eternal search of the alchemist for a way to turn lead into gold).

The bill, initially co-sponsored by Senator McClure, ranking minority member of the Energy and Natural Resources Committee, and on April 3 by Senator Warner, leaves the

existing site selection provisions in the Nuclear Waste Policy Act (NWPA) intact, but adds language that would provide a willing host repository state \$2.5 billion over the lifetime of the facility. An MRS volunteer host state would receive a total of about \$2 billion.

Reaction Not Supportive

Reaction to the proposal in Congress has been more negative than neutral or supportive. Texas, Washington, Nevada and Tennessee Governors and the majority of their states' Congressional delegations soundly denounced it. Senator Evans (R-WA) "was glad to see such an initiative introduced since the HLW program is in trouble." However, the Washington State Senator and former Governor emphasized that an incentives offer, ala Johnston, "cannot act as a substitute for a technically creditable site selection process." He made it very clear that financial incentives should be authorized but they should be offered to a host state only **after** completion of site characterization and selection based on technical and scientific grounds.

Senator McClure, as co-sponsor, sees the bill as meeting the need to have a positive incentive rather than just trying to force a repository on a state. Contrary to the view of opponents of the measure, he does not view the initiative as a recognition of DOE's failure to implement the program, he sees it rather as addressing a major shortcoming of the NWPA.

Another exception is Congresswoman Marilyn Lloyd who, as Chairman of the House Science and Technology Subcommittee, successfully engineered the adoption of a budget recommendation provision that eliminated funding support for site characterization in Texas and Washington and directed DOE to provide Nevada funds to develop a report to Congress stating conditions under which the state would support hosting a HLW repository (See Story this issue).

DOE's reaction was also supportive. Officially the word is that the Department generally supports the intent of the

measure, that appears to have fundamental advantages.

MRS \$20 Mil; HLW \$100 Mil per Year

According to the Johnston-McClure "Build a Repository with Incentives and Bidder Enhancements" (BRIBE) proposal the HLW repository financial incentives package is as follows:

- o DOE would be authorized to negotiate an incentive agreement with **one** of the three states with candidate sites (Washington, Nevada or Texas). For 12 months after enactment any other state with a suitable site could also seek to enter into such an agreement.
- o Under an incentive agreement a state would receive:
 - \$100 million at execution of the agreement;
 - \$50 million annually until the opening of the facility;
 - \$100 million at the opening of the facility; and,
 - \$100 million annually until closure of the facility.

One-third of any payment is to be passed through to unites of local government affected by the facility.

- o In return for the dollar payments a state would agree to expedite construction of the facility and waive its right to judicial review of issues covered by the agreement and its right to veto the facility under title I of the Act.
- o A Review Panel would be established to participate with DOE in the design and operation of the facility.

For an MRS the package benefits are lower:

- \$50 million at execution of the agreement;
- \$20 million annually until the opening of the facility;
- \$50 million at the opening of the facility; and,
- \$50 million annually until closure.

MRS Authorized, 2nd Repository Killed

In addition to providing financial incentives to entice states to volunteer to host a HLW facility, the bill provides authorization for the MRS, and defers the second repository program once an incentive agreement for an MRS and a first repository are in effect.

The bill also prohibits DOE from having more than one incentive agreement on either the repository or the MRS in effect at any one time (so if you are not first at the payout window you are out).

According to reports from individuals who were privy to drafts of the bill, earlier versions would have deferred the second round program with only an incentive agreement for an MRS in place. This certainly would not have been acceptable to Senator Sasser and the Tennesseans who are now fighting authorization of an MRS in Tennessee.

"Bribery" Won't Work Say States

Washington Governor Booth Gardner said his state wasn't interested in the Johnston approach. He emphasized that selection of a repository site must be based on sound scientific evidence and a national consensus. In his view a "quick fix" is not needed, instead a public forum needs to convene to decide on what needs to be done to proceed with the program, including possibly developing positive incentives. Governor Bryan of Nevada likened the proposal to "nuclear blackmail", exclaiming that it was an irresponsible action that offended and insulted the residents of Nevada.

Texas viewed the bill with similar disdain. Steve Frishman, Director of the State HLW Program, remarked that the proposal degraded the position taken by Congress in adopting the 1982 Nuclear Waste Policy Act, which placed "a high premium on a technically creditable site selection process."

Nevadans Incensed

The strongest negative reaction to Senator Johnston's initiative came from Nevada where reports from state newspapers contacted by the EXCHANGE noted that Nevada citizens were incensed at the view "they could be bought." Former Governor Michael O'Callaghan, now Chairman of the Board of the **Las Vegas Sun** and a vigorous opponent of locating a repository in Nevada, stated "If the high level nuclear waste dump is bad for Nevada's economy and the health of the citizens of the Silver State today, why should \$100 million make it acceptable next year?" The view of his paper and what (as far as the EXCHANGE has been able to determine) is apparently the view of the majority of Nevadans was expressed in an editorial featured in the March 31 edition of the **Las Vegas Sun** (See **Readers' Exchange** in this issue).

Senator Chic Hecht, who at times has not been as adamantly opposed to locating the repository in Nevada as the other members of the State Congressional delegation, also expressed his opposition to the buy out proposal, remarking that there must be a better way and exclaiming that Nevadans won't be bought.

Nevada Congresswoman Barbara Vucanovich called the Johnston bill "irresponsible", saying that such financial inducements cannot override the scientific and technical site selection process outlined in the NWP. Her office explained that she supports providing a host state with a financial incentives package, but only after the site has been selected based upon a scientific and technically creditable process. She continues to advocate a full national site screening process that would re-examine all possible locations in the U.S.

As to the type of financial incentives that could be provided to a state once a site was selected on technical grounds, Ms. Vucanovich has mentioned coupling the site of the Supercollider with the location of the HLW repository (a possibility first raised by Senator Johnston).

Hearing Scheduled, Amendments Expected

Senator Johnston has scheduled hearing on S. 839 and expects to hear from the Nuclear Regulatory Commission on various aspects of the program on April 28 and 29. On the afternoon of April 29 he also scheduled a hearing on the DOE MRS proposal.

One can expect that there will be efforts to kill the proposal in committee, but it is unlikely that they will succeed given Johnston and McClure's support and the fact that the NWPA is, after all, left intact. Amendments, however, can be expected that would change the timing of the incentives package, authorizing financial payment only after site characterization of all three sites and a final selection based on scientific and technical grounds. It can also be expected that Johnston's deferral of the second repository will be opposed. Given the recent talk and interest expressed in regional MRS's (McClure, Morrison, Evans), there could also be a move to allow DOE to have in place more than one incentive agreement for an MRS. There is also the possibility the New Mexico Senator will want to get in on the "incentives" for accepting the WIPP facility. The EXCHANGE has also learned that amendments will be offered to change the repository site selection and operation timetable to a more reasonable and achievable time frame. **

NEVADA "CHOSEN ONE" BY S&T SUBCOMMITTEE, FORMER NAS BOARD MEMBER

Congresswoman Marilyn Lloyd and her Subcommittee on Energy Research and Development, including ranking minority member Sid Morrison, pointed the finger at Nevada for the site of the HLW repository (and possibly joined what could be a growing silent majority in Congress who are coming to the conclusion that one way to rid themselves of dealing with the continuing troublesome problem of disposal of HLW would be to pick Nevada as the "chosen one", to temper the opposition by plying the state with gifts, and let the politics of numbers or Nevada's lack of firepower play its course.

As Congressman Sid Morrison pointed out in a local Washington State newspaper, while Texas has the Speaker of the House, Jim Wright, and Washington State the new Majority Leader in the Senate, Tom Foley, "Nevada has two senators and two house members without seniority.... If it boils down to a political shooting match Nevada will lose!"

The Subcommittee most assuredly fired the first shot in the shouting match in issuing a recommendation on the DOE HLW program budget request that provided funding support for characterizing only the Yucca Mountain site prohibiting any further work at the Hanford, Washington, or Deaf Smith County, Texas sites. In addition, the Subcommittee recommended that DOE fund the State of Nevada "to develop a report to Congress stating the conditions under which it would support siting a repository at Yucca Mountain."

Though ranking minority member Morrison has publicly stated his opposition to a buyout approach, ala Johnston, the Subcommittee's recommendation of eliminating Washington from the "recipient" list did apparently "buy" his support for the Tennessee Congresswoman's proposal to have Nevada contemplate on just what their asking price would be.

Not unexpectedly, the Subcommittee also recommended zero funds for DOE's proposal to locate an MRS facility in Congresswoman Lloyd's home district in Tennessee.

Technical Backing for "NV Only Approach"

The Subcommittee action, though obviously developed with a lot of political forethought was bolstered by testimony given at the Subcommittee public hearings held the prior week. At this hearing Dr. Konrad Krauskopf, a former member of the National Academy of Sciences Board on Radioactive Waste Management and currently with the Geology Department of Stanford University, appearing on his own behalf, endorsed the concept of choosing one site and suggested that the Yucca Mountain location was the best choice.

Dr. Krauskopf, who served on the NAS Radwaste Board for 18 years, did note that his thinking on site selection had been influenced by Luther Carter and Professor Keeney (one of the prime movers behind the Multi attribute Analysis (MUA) techniques). Though he advocated proceeding with characterizing one site, with that site being the one at Yucca Mountain, the former NAS Board member cautioned that there was one serious deficiency with that approach, namely that there would be no backup if a problem was discovered at the one site during characterization. He said, should that occur, there would be a significant delay caused by the necessity to begin characterizing one of the remaining two sites. When asked directly whether he personally knew of any information that would lead him to believe the Yucca Mountain site was unsuitable, he simply stated "Not to my knowledge."

NAS: All Sites Technically Qualified

Prior to Dr. Krauskopf's testimony, Dr. Raphael Kasperson, Executive Director of the National Research Council Commission on Physical Sciences, Mathematics and Resources, under which the NAS Radwaste Board functions, told members of the Subcommittee that it was the position of the NAS that all three sites now being considered were scientifically and technically suitable. He emphasized in his testimony, and in response to members questions, that the NAS was only to provide scientific and technical judgements on specific tasks or actions taken by DOE and was not asked to make a comparative assessment of the sites.

Dr. Kasperson pointed out that on technical and scientific bases, it was not possible to show that one of the three sites for characterization had an advantage over the other, and the DOE did "an excellent job of applying the MUA methodology" following the recommendations of the NAS Radwaste Board.

Single Site Approach "Good Business"

At the hearing Office of Civilian Radioactive Waste Management (OCRWM) Director, Ben

Rusche, after dutifully defending the program, was first complimented by Chairwoman Lloyd as doing a "Yeoman's job" on running the program, then told quite plainly that Tennessee is one state that doesn't want the MRS. Mr. Rusche left the statement unchallenged, but when faced with criticism of delaying the second round decision and as a result upsetting the "grand compromise" reached in developing the Nuclear Waste Policy Act, he remarked as to how the "grand compromise had some illusory characteristics."

Ms. Lloyd then proceeded to ask the OCRWM Director for his thoughts on proceeding with only a single site. He initially remarked that he was in a quandary as to how to respond since as Director of the HLW program he "must carry out the provisions of the Act." But, when pressed by the Congresswoman, who pointed out the current trouble and expense of going on with the three sites, he did admit that from a business standpoint the Luther Carter proposal (single site approach) had a good appeal. He added that if the Congress reaches a consensus to change the course of the program, the Department is ready to follow.

Time to Open Act

Amidst the give and take with Ms. Lloyd the OCRWM Director publicly stated for the first time that "it may well be time to open the Act." Mr. Rusche's statement is significant in that up to this time both he and the Secretary have said that Congress must act in some affirmative manner to provide direction to the Department on the second round program, but that such affirmative action could be taken through the Appropriations process and that new legislation was not needed. Mr. Rusche, outside of pointing out what was also stated by Dr. Konrad Krauskopf, that proceeding with one site could result in having no backup, did not offer his standard argument of yesteryear that the Act was a "great legislative achievement and that we ought to let it work its course." **

NEVADA GOV. FIGHTS BACK, IDENTIFIES TECHNICAL PROBLEMS WITH YUCCA SITE

Responding to the Luther Carter "select Nevada" proposal one day before Senator Johnston's introduction of the "Buy a HLW Repository Site" bill, Nevada Governor Richard Bryan wrote the Louisiana Senator a fourteen page letter refuting arguments that the Nevada Yucca Mountain site was technically suitable for a HLW repository, blaming DOE's implementation for the failure of the current HLW program, not the process outlined in the NWPA, and recommending a series of measures to put the program back on track.

The Governor reiterated that the "state's experiences with DOE [leave] no option but to conclude that [the states] cannot trust DOE's technical analysis and...there can not be reasonable assurance under DOE's program that a site would be a safe, let alone the best, available."

Technical Flaws with Yucca Site

According to the Governor's letter the state's analysis "suggests that there are at least four major potentially disqualifying features of the Yucca site: tectonics, geohydrology, off-site installations, and water quantity and quality, and five other technical areas of significant concern: mineral resource potential, risk of volcanic eruption, possible changes in future climactic conditions, instability of underground repository opening, and flash flood protection." The Governor identified specific findings in each technical area that would disqualify the Yucca Mountain site. He also cited a 1979 letter from the National Academy of Sciences calling attention to many of these technical issues, and to NRC comments on DOE's final Environmental Assessments which do likewise.

"Simply stated," the Governor concludes, "there are major potential disqualifying flaws in the Yucca Mountain site which DOE has either dismissed with insufficient scientific evaluation or chosen to ignore completely.... [T]hese technical concerns are of comparable seriousness to those

raised with respect to the Washington or Texas sites."

Wants Moratorium, Investigation, Rollback

After describing the present DOE program as "beyond repair" the Governor suggests that the only way to correct it is to "impose a moratorium on further siting activities while a proper investigation is being conducted and 'mid-course corrections' are being developed." He urges Senator Johnston to "consider having some type of independent, unbiased, non-political body assist in developing the facts during this investigation.... [Like] the Tower and Rogers Commission, [it could] promptly and effectively help establish what went wrong, thereby giving Congress a firm factual basis for deciding how to correct the problem."

The Governor also suggests that such an investigative study would find that, among other things, the Yucca Mountain site was selected prior to the passage of the NWPA and DOE "has shaped, skewed and manipulated many aspects of this program to confirm and ratify this predetermined selection." "Furthermore," he adds, "the Siting Guidelines are fatally flawed."

Recommended Program Changes

Though the Governor recognizes that many of the necessary program corrections cannot be made until the completion of this recommended investigative study, he emphasizes that the changes would have to include:

- Dropping the nominations of Nevada, Washington and Texas for site characterization;
- Withdrawing the Guidelines and the Environmental Assessments (EA's);
- Adopting realistic time lines so that key program decisions are not driven and biased by artificial and unreasonable deadlines;
- Issuing new, revised, unbiased Guidelines that will ensure objective, scientifically grounded and fair siting

decisions and that take into consideration the experiences and technological advances made by other countries (e.g. Sweden);

- Screening for additional potentially acceptable sites in conformance with the revised Siting Guidelines;
- Greater economic incentives to host states; and
- The creation of some type of independent ongoing oversight body to monitor, and where appropriate, to redirect DOE's implementation of the program. **

SUPREME COURT TURNS DOWN TENNESSEE, DOE SUBMITS MRS PROPOSAL TO CONGRESS

Within a day of the Supreme Court's decision rejecting Tennessee's petition for "a certiorari" to have the Court hear their suit challenging submission of DOE's proposal to locate a Monitored Retrievable Storage facility (MRS) in Tennessee, DOE forwarded the proposal to Congress (See EXCHANGE, Vol 6, No. 5).

The MRS "package" as forwarded to the various key committee and leadership included three volumes -- The Proposal: Vol. 1; The MRS Program Plan: Vol. 2; The Environmental Assessment: Vol. 3 -- all nicely published and bound. DOE's lightning response to the Court's decision is by far the quickest and most thorough action taken to date within the HLW program.

Changes From Earlier MRS Proposal

Though the MRS proposal reflects, for the most part, the documentation that the "DOE had expected to submit to Congress a little over a year ago," it does contain changes over the earlier versions.

The most significant of these are that:

- The planned startup (over what was proposed earlier) has been delayed two years until the first quarter of 1998, with construction beginning in mid-1992, and completion scheduled for the last quarter of 1996.

- The estimated Total System Life Cycle costs of incorporating the MRS into the waste management system have been revised downward to \$1.6 billion from the April, 1986 estimated range of \$1.6 to \$2.6 billion.

The two year delay in MRS still allows DOE to meet the January 31, 1998 fuel acceptance deadline included in the contracts with the individual utilities. DOE explains that the two year delay from the initially proposed startup is to provide for design changes that would be necessitated by the delay in the startup of the repository from 1998 to 2003 as proposed in the Revised Mission Plan, and to allow for more effective interaction with Tennessee and the citizens of Roane County.

Conditions for Proceeding

As submitted to Congress the proposal provides specific conditions under which the development of the MRS will proceed. They include:

- o The storage capacity at the MRS site would be limited to 15,000 metric tons of uranium;
- o Waste could not be accepted by the MRS facility until a construction authorization for the first repository is received from the Nuclear Regulatory Commission;
- o DOE must implement specifically detailed measures responsive to the concerns and recommendations of the State of Tennessee and local governments, as specifically outlined in the proposal.

State, Local Involvement Commitments

In the proposal to Congress DOE commits to establishing an MRS Steering Committee and the development of a consultation-and-cooperation agreement with Tennessee. The MRS Steering Committee is intended to "provide a mechanism for State and local involvement in the implementation...and for obtaining input, including recommendations and evaluations, regarding the design,

construction, operation, and decommissioning" of the facility. The Committee would "provide guidance, conduct performance evaluations, and recommend corrective actions."

The membership of the Committee is proposed to be as follows: a Chairman named by the DOE in consultation with the Governor of Tennessee; two members representing the state of Tennessee; one member representing Roane County; one member representing the City of Oak Ridge; one member representing the utilities paying into the Nuclear Waste Fund; one member representing other public interests; and, two members representing the DOE, one of whom would represent the DOE's Assistant Secretary for Environment, Safety and Health.

The chairman is to serve for a four-year term and would have staff support from the MRS project. The Committee is to have "complete and full access to information concerning the MRS that is available to the DOE manager."

Cost of Facility Argued as Minimal

In response to increasing concern over what the MRS would cost the utilities and the rate payers over and above a waste management system without such a facility, DOE argues that "the net incremental costs are estimated to be "from \$1.5 billion to \$1.6 billion, not including avoided costs, financial assistance, and intangible benefits,...therefore [they] constitute a small percentage of the total-system cost; [and]...in fact, they are within the uncertainty range of current cost estimates for a waste-management system without an MRS facility." [EDITORS NOTE: DOE now estimates the total waste system life cycle costs to be between \$32 and \$38 billion in constant 1986 dollars.]

DOE further contends that:

"the costs [of the MRS] borne by the utility ratepayers would be offset by savings in at-reactor storage costs; these costs would be avoided because an MRS would allow the DOE to accept spent

fuel at an earlier time, and, under certain scenarios, it is possible that the addition of an MRS facility would result in net and overall system cost savings. For example, it has been estimated that the deployment of an MRS facility consistent with the Draft Mission Plan Amendment would preclude the need for additional storage capability at more than 15 reactor sites and could offset more than 10,000 MTU of at-reactor storage. If this incremental at-reactor storage costs \$100,000 per metric ton, the result could be a savings of \$1 billion at the reactor sites."

Institutional Benefits of MRS(?)

In light of what is expected to be a continuing fight against the deployment of the MRS in Tennessee, it is interesting that the MRS proposal documents cite continued interaction with Tennessee as one of the benefits that will accrue to the entire program if the MRS is authorized. According to the proposal: "Institutional benefits would also result from the opportunity to demonstrate earlier that facilities developed under the Act are safe and that in developing and operating these facilities the DOE is a responsible corporate citizen and neighbor."

Sweetening the Impact

In addition to providing Tennessee necessary financial assistance to participate in and provide oversight of the development of the MRS, providing funds to mitigate direct socio-economic adverse impacts, and payments-in-lieu of taxes, DOE "commits to sweetening the pot" a bit more. DOE commits to establishing a Transportation Operations and Research Center in the Oak Ridge area. And to try to alleviate concerns that the MRS will inhibit other industrial and economic development within Roane County, the DOE proposal states that such "impacts would be addressed through payments allocated for the mitigation of any such impacts." (Does this mean that if IBM or some other corporation decides that building the MRS in Roane County contributed to deciding against locating their business activity in that area the state and

the county would be eligible for funds to the degree that would mitigate this impact?! Incentives like this, coupled with a "Johnston buy-out" program may have some appeal to old Tennessee gamblers but, from the look of things now, could result in a backlash as DOE is hearing from Nevada.)
**

SASSER, GORE RAISE "NEED" ISSUE IN FIGHT TO STOP MRS PROPOSAL

The day following the Supreme Court decision allowing DOE to submit the MRS proposal to Congress and a couple of hours after DOE officially forwarded it to the Hill, Senators Sasser and Gore held a press conference charging that DOE is violating the Nuclear Waste Policy Act (NWPA) by sending the Monitored Retrievable Storage facility (MRS) proposal to Congress without including a "detailed assessment of the need for such a facility from the Nuclear Regulatory Commission."

The Senators cite section 10161(b)(3) of the NWPA which requires the Secretary to:

"complete a detailed study of the need for and feasibility of, and ...submit to the Congress a proposal for, the construction...monitored retrievable storage facilities.... In formulating such proposal, the Secretary shall consult with the [Nuclear Regulatory] Commission and the Administrator [of the Environmental Protection Agency], and shall submit their comments on such proposal to the Congress at the time such proposal is submitted."

In their view the "question of 'need' is the very one that must be most searchingly explored before an MRS is authorized and funded. Not only is there doubt about the need for pre-packaging spent fuel, there is also doubt about whether a facility expressly dedicated to re-packaging is either prudent or necessary."

Furthermore the Tennesseans exclaim that "if the real 'need' for an MRS is based on the probability that a final repository will never be sited and completed, then the DOE should say so and the NRC should concur in

the justification."

The charges are detailed in letters sent to Secretary Herrington, NRC Chairman Zech and to Senator Bennett Johnston.

NRC In Violation of NWPA

Commissioner Zech is informed by the Senators that NRC's " cursory dismissal of its obligation to provide a detailed substantive assessment of need for an MRS [as required by Section 10161(b)(3) of the NWPA] is a clear violation of the letter and intent of the Nuclear Waste Policy Act. As such it is simply unacceptable." The Commissioner is then requested to undertake to determine a "need assessment."

MRS Buy Out Approach By-passed

In their letter to Senator Bennett Johnston, Sasser and Gore point out that the alternative procedure for siting an MRS outlined in the Energy Chairman's incentive package legislation would not be available if DOE proceeds with site specific work on an MRS in Tennessee. They advise Johnston that "Opening up the MRS siting procedure to 'bids' from States and Indian tribes would have little merit if the Department of Energy is allowed to push for expeditious action on an MRS under existing law. We therefore believe any action on an MRS should be delayed until the Congress has worked its will on your alternative proposal."

No answer to the Senators plea had been sent when this edition of the EXCHANGE went to print (April 6), but the Chairman of the Energy and Natural Resources Committee did schedule a hearing on the DOE MRS proposal for the Afternoon of April 29. **

NRC TOLD TO ASK DOE TO "SHOW CAUSE" WHY WA SITE SHOULDN'T BE DISQUALIFIED

After completing a review of the Department of Energy's conclusions regarding groundwater travel times at the proposed Hanford HLW site for the Nuclear Regulatory Commission, an outside contractor -- Nuclear Waste Consultants (NWC) -- advised NRC staff "to consider directing DOE to

show cause why the site should not be disqualified based on any reasonable interpretation of the available information, and the 10CFR960 requirement that the Department has set for all repositories." The contractor's review found DOE's conclusions about groundwater travel time (GWTT) too optimistic, and the Department's analysis incorrect. According to the consultant report "there is low probability that the GWTT will exceed 1,000 years (between 20 and 50 percent), and much lower probability that GWTT will exceed 10,000 years (between 2 and 7 percent). The differences between the DOE conclusions and the contractor's review of the work is attributed to the differing interpretations of rock porosity.

DOE Commended, Chastised For Work

The reviewers did commend DOE for attempting to treat the "variability of hydraulic data and the potential uncertainties in the models of groundwater flow in a conceptually sound framework." However they then went on to state:

The analysis presented ... calls to mind an aphorism attributed to Andrew Lang, 'He uses statistics as a drunken man uses lampposts - for support rather than for illumination'. The approach presented ... is complex and difficult to review, and goes a considerable way to diverting attention from the manipulation of the basic data that has been used to produce the claimed 'conservative' answers. However, it remains the position of the review team that the currently available field-derived data (as distinct from generally canvassed opinions) indicate a GWTT in the order of 1000 years, with an uncertainty of at least an order of magnitude."

NRC Reluctant to Support Findings

The initial report was provided to NRC staff some months ago. They were reluctant to support the conclusions of the contractors. Internally the NRC staff indicated that the Nuclear Waste Consultants' analyses of groundwater travel time at the Hanford site were overall conservative and

inadequate in two areas: (1) lack of consideration of a realistic conceptual model of the groundwater flow system, and (2) hydraulic conductivity and effective porosity.

They described the consultant analysis as "boldly overstated given the large uncertainties associated with any current estimates of groundwater travel time at the Hanford site."

Firm Asked to Reexamine Review

NRC requested that NWC reexamine their work. The firm did so and recently informed NRC staff that they had completed a careful re-review and had an independent assessment of all mathematics by two different organizations with an additional peer review of the body of the text. The result was that their initial conclusions were reaffirmed: "based on the review results, the reviewers consider that there is a significant likelihood that the BWIP site will fail the 1,000-year travel time rule as currently interpreted in the NRC's draft technical position. This directly contradicts the Rockwell evaluation."

NRC Finally Writes DOE, But...

NRC recently forwarded the contractor report to DOE, informing the DOE that "both the NRC staff review and that of Nuclear Waste Consultants (NWC) question the DOE's conclusion in the final Environmental Assessment (EA) that the groundwater travel time at the Hanford site will be well in excess of the 1000 year requirements." However the NRC tempered the conclusions arrived at by NWC by saying that with the uncertainties that exist at the present "travel times may be significantly closer to 1000 years than the DOE has stated."

NRC also expressed the view that with the limited data base existing it is premature to place any "significant amount of credibility on any current estimate of groundwater travel time, until additional data has been collected." The staff did agree with NWC that additional site characterization work is necessary and desirable. According to NRC the anticipated testing program should

yield the required information and allow better estimates of pre-emplacment groundwater travel time, as well as providing the data to begin addressing questions related to post waste emplacment groundwater flow and radionuclide transport.

State of Washington representatives have indicated that the contractor's findings demonstrate another example of the optimism that DOE has demonstrated in its siting work and documentation, rather than taking the conservative approach that a project of this magnitude and importance requires. **

POSITION OPENING

Research Associate: Washington State Institute for Public Policy

DESCRIPTION: Independently analyzes and evaluates research and data in interdisciplinary areas which may include radiation health physics, environmental science, radiochemistry, geology and hydrology, or other technical areas, and informs and advises the state legislature on high-level nuclear waste issues. The Research Associate must research, analyze, and produce effective, readily-comprehended reports on highly complex issues. Maintaining good working relationships with technical specialists, governmental administrators, legislators, non-partisan and partisan staff, and the interested public is essential. The incumbent will also be expected to demonstrate initiative in identifying issues and research strategies to improve legislative effectiveness in shaping state policy regarding high level radioactive waste disposal. This is a grant-funded position. **SALARY:** \$2,108 - \$3,432 monthly, plus benefits.

MINIMUM QUALIFICATIONS: Master's degree in a scientific or engineering discipline such as geology, physics, chemistry, hydrology, radiation health physics, nuclear engineering, mining engineering, or environmental science and three years' experience doing technical/scientific analysis and research with emphasis in public policy areas. Experience with governmental regulations and legislative processes desirable; **or** Bachelor's degree in a scientific or engineering discipline such as geology, physics, chemistry, hydrology, radiation health physics, nuclear engineering, or environmental science and five years' experience doing technical/scientific analysis and research with emphasis in public policy areas. Experience with governmental regulations and legislative processes desirable.

APPLICATION PROCEDURE: Submit a letter of application explaining your interest in an qualifications for the position, a resume, a writing sample, and the names of three references with addresses and phone numbers to: Employee Relations Office, the Evergreen State College, Olympia, WA 98505. (206) 866-8000 ext. 6361. Applications must be postmarked no later than April 17, 1987.

IN THE CONGRESS

PRICE-ANDERSON REAUTHORIZATION Unable to obtain cosponsorship with the Senate Environment and Public Works Committee to reauthorize Price-Anderson liability coverage, **Senator Bennett Johnston** decided to introduce a contractor-only coverage bill in the late afternoon of the day before his **Energy and Natural Resources** committee's scheduled March 18 hearings. The bill (S. 748), distributed the morning of his hearing, was the compromise draft agreed to during the past Congress by the Senate Energy and Public Works Committees, with the sections concerning NRC licensees suitably crossed out. At the hearing Senator Johnston stressed the need to act on the bill since Price-Anderson coverage of DOE contractors expires August 1, 1987.

The key provisions are:

- o Extend Price-Anderson coverage for DOE contractors for 20 years with limit on liability of \$6.0 billion and include coverage of all activities related to the HLW program.
- o If the aggregate liability limit of \$6.0 billion is exceeded, the President is to submit a Compensation Plan for action by the Congress according to procedures and time limits specified.
- o Punitive damage judgements under state court law against contractors covered by the Act are prohibited.

Senator Howard Metzenbaum didn't waste any time at the hearing immediately raising the issue that under the proposed bill the federal government would be accepting liability for nuclear incidents resulting from contractors' "gross negligence and willful misconduct." In an opening statement and subsequent questioning of witnesses, particularly DOE officials, he presented compelling arguments for incorporating language that would make contractors liable for action proven to involve "gross negligence and willful misconduct." The Ohio Senator singled out DOE for his harshest criticism, pointing out that in 1986

Secretary Herrington supported a "gross negligence and willful misconduct" exemption in Price-Anderson liability coverage for contractors. Now, without giving any reason, the DOE has changed its position. When Metzenbaum repeatedly asked for reasons for the switch, no explanation was given except that "it was made after more careful consideration." The Senator termed the DOE position defending the contractor's position as "silly", pointing out repeatedly that Defense Department contracts exempt the federal government from liability resulting from a contractor's "gross negligence and willful misconduct" and this has not deterred firms from bidding on Defense contracts.

Metzenbaum's dogged questioning on the issue set the stage for the remainder of the hearing. Chairman Bennett Johnston delved into the issue with each witness, bringing out as well as he could reasons why a "gross negligence and willful misconduct" exemption as being proposed by Senator Metzenbaum would seriously affect the federal government's ability to attract contractor services and would hamper prompt victim compensation under Price-Anderson coverage. Johnston found support among the witnesses testifying on behalf of the contractors, DOE, Professor Arthur Murphy of the Columbia School of Law, and from Senator Wallup of Wyoming.

DOE stated it had the ability to punish contractors for "gross negligence and willful misconduct" under other provisions of their operating authority. The contractor's pointed out that their personnel operate under the management of DOE personnel who are responsible for decision-making.

The Chairman had built a substantial hearing record against Senator Metzenbaum's position until Ms. Keiki Kehoe of the Environmental Policy Institute took the stand. Ms. Kehoe held her own in a give and take with the Chairman, very effectively backing the position taken by Mr. Metzenbaum. She refuted DOE's statement that the Department had the authority to punish contractors. She pointed out that in the past Congress Defense contractors

like TRW had supported exempting the federal government from being liable for contractor "gross negligence and willful misconduct." Ms. Kehoe directed the Committee's attention to hearings held by Senator Grassley of Iowa and a proposed comprehensive federal contractor liability bill wherein the Department of Defense and the Department of Justice, joined by defense contractors, testified in favor of having an exemption in liability coverage for contractor "gross negligence and willful misconduct." Mr. Johnston requested that she produce the statements from these hearings and her rebuttal of DOE's contention that it had the authority to punish contractors for the record.

The week following Senator Johnston's hearing, **Senator Stafford** introduced a comprehensive Price-Anderson bill covering both NRC licensees and DOE contractors (S. 843). The bill referred to the **Senate Environment and Public Works Committee**, is, in most respects, identical to Congressman Udall's proposed Reauthorization legislation (HR. 1414). The one exception deals with compensation for a nuclear incident beyond the aggregate liability limit (now about \$7 billion).

Senator Stafford proposes that the federal government "would guarantee payment of all damages above the industry's exposure limit", but instead of Congress determining the compensation for each claim, the amount would be determined by the federal court system with Congress determining only **how** to pay the claims. According to a staff section-by-section analysis, once the courts set the amount of the claims, Congress could then decide to "impose additional retrospective premiums upon the nuclear industry, impose fees on nuclear-generated electricity, on electricity generated from all sources, or simply collect the money from taxes."

Stafford does not impose any limit on public liability with respect to liability coverage for DOE contractors involved in HLW program activities. The federal government would

indemnify such contractors for all public liability above the amount of financial protection required (\$7 billion). The Nuclear Waste Fund would be the source of funds to compensate claims up to the set aggregate liability limit. Beyond the limit Congress would decide how to cover the liability. This scheme is similar to Udall's if Congress fails to act within one year of an accident, but does not allow Congress the option of redefining full compensation after an accident occurs.

Congressman Udall's Interior Subcommittee marked up his proposed P-A reauthorization bill (HR. 1414) on April 2 (See EXCHANGE, Vol. 6, No. 5). The markup was uneventful except for members announcing their right to bring up amendments in full committee. The bill was forwarded to full committee virtually intact.

Perspective - Outlook The lack of a jointly sponsored (Energy and Environment) comprehensive P-A bill was viewed as a major setback to achieving passage of a full coverage P-A bill this session. But that may not be the case. The House is already into markup and Senator Stafford has introduced a full coverage bill in the Senate. From what the EXCHANGE has learned a full coverage bill has a very good chance of being reported out of Senate Energy's markup on April 8. Expect a lively discussion on (and possibly even a small victory) for those attempting to make contractors liable for action involving "gross negligence or willful misconduct."
**

IN THE INDUSTRY

The **Babcock & Wilcox** Nuclear Power Division (NPD) has formed an Office of Spent Fuel and High-Level Waste Services at their Lynchburg, Va. headquarters. T. R. (Tom) Stevens has been named program manager. Tom previously held various assignments within NPD including program manager for Three Mile Island-2 recovery operations and, most recently, the manager of quality assurance. **

NEVADA REACTION TO SENATOR JOHNSTON'S PROPOSAL TO OFFER FINANCIAL INCENTIVES TO A REPOSITORY HOST STATE

(Excerpts From An Editorial Published in the Las Vegas Sun)

Senator Bennett Johnston termed his offer of \$100 million a year to any state or Indian tribe accepting the high level nuclear dump as a "little carrot." But Nevada's Governor Richard Bryan, Senator Harry Reid (D-NEV), and Representative James Bilbray (D-NEV), rejected such a tempting morsel offered on a radioactive stick. The governor termed the offer "nuclear blackmail."

Johnston has come a long way from the 1982 Nuclear Waste Policy Act (NWPAA) which spelled out how a search for two nuclear repositories would be conducted, basing all decisions on health and safety.

Why has the Senate Energy Committee chairman abandoned health and safety issues in favor of a quick fix?

Because Congress fears the Department of Energy has trampled the program into the dust, with charges of political favors (by ending a search for an eastern dumpsite) and failing scientific quality assurance tests.

Then, DOE delayed opening the permanent repository five years, raising the need for a temporary storage facility, probably in Tennessee.

If Johnston can get a state or Indian tribe to snatch that nuclear carrot, he solves a myriad of problems, including at first glance, getting nuclear industries off Congress' back.

But hundreds of thousands of nuclear power plant customers will pay that \$100 million-a-year tab and continue to pay it as long as the dump stays in operation. They also would fork over \$50 million a year for a temporary storage site....

Johnston's bill would also take the heat off the eastern states, which face another search for a second repository, if Congress decides to open up the Nuclear Waste Policy Act this year.

Bryan, Reid and Bilbray have told Johnston and Sen. James McClure (R-ID), that the nuclear buck stops here. Nevada, they said, won't be bought or sold into a nuclear dump. The governor has noted time and again Nevada hosts the Nevada Test Site, where the nation's nuclear bombs explode during underground experiments, military installations across Nevada and a 20-year relationship with a commercial low-level nuclear dump in Beatty. That's quite enough national service, he says....

Under Johnston's scheme, the state would have to give up its rights to sue the government in court and speed up construction of the repository. The state could back out of the deal up until the time construction started, but would have to pay back any monies it received.

There's an old saying that money talks. In the case of upping the payments for a state's acceptance of a nuclear dump, those dollars can't even get Nevada's attention by shouting....

Nevada's no dumb bunny....

Mary Manning
The Las Vegas Sun

Calendar

April		29	Hearing: (Afternoon) MRS Proposal; Senate Energy and Natural Resources Committee; Contact: Ben Cooper (202) 224-5360.
1	DEADLINE: Proposal Seeking LLRW Burial Site Operator Selection, Central States Region.	30	Hearing: P-A Reauthorization; Comprehensive Bill (S. 843); Spons: Senator Stafford) Senate Environment and Public Works; Contact: Dan Berkovitz, (202) 224-4039.
2	Markup: Price-Anderson Reauthorization; House Interior Committee, Contact: Sam Fowler (202) 225-8331.	30-1	Meeting: Fifth Annual Spring Meeting: CALRAD Forum; "Progress Toward A Safe, Reliable, Cost-Effective LLW Disposal Facility in CA"; Palm Springs, CA; Contact: Jean Parker (415) 647-3353.
6	Workshop: Radioactive Waste: A Kaleidoscope of Environmental and Economic Issues; Sheraton Carlton Hotel, Washington, D.C.; Spons: American Bar Association Natural Resources and Public Utilities Section; Registration Fee: \$125 ABA Members, Attorneys; \$75.00 for Gov't Attorneys, PI Groups, Law Prof.; Contact: Sue O'Neill (312) 988-5625.	May	
8	Markup: P-A Reauthorization (S. 748); DOE Contractor coverage; Spons: Sen. Johnston; Contact: M.L. Wagner (202) 224-7570.	1	Public Hearing (Tentative): Washington State proposals on Hanford Site users liability requirements; Contact: Elaine Carlin (206) 459-6228.
10-12	Meeting: NCSL Legislative Working Group on High-Level Waste; Stanford Court Hotel, San Francisco, CA; Registration Fee: \$65.00; Contact: Cheryl Runyon (303) 623-7800.	3-6	Meeting: Low-Level and Mixed Waste Disposal: The Public and the Science; Hyatt Regency Bethesda, Bethesda, MD; Spons: American Nuclear Society; Contact: Mary Keenan (312) 352-6611.
14	Meeting: Midwest Interstate Low-Level Radioactive Waste Commission; Signature Banquet Room, Milwaukee Airport Terminal, 5300 South Howell Ave., Milwaukee, WI; 9:30 a.m. - 12:30 p.m.; Contact (612) 293-0126.	3-6	Fourth International Symposium on Environmental Aspects of Stabilization/Solidification of Hazardous and Radioactive Wastes; Hotel Tower Place, Atlanta, GA.; Spons: ASTM; Contact: T.M. Gilliam (615) 574-6820.
14-16	Workshop: Packaging, Transportation and Disposal of LLRW; Spons: Chem-Nuclear; Sheraton Charleston, Charleston, SC; Contact: Jan Edmunds-Folk (803) 259-1781.	5-7	Nuclear Power Assembly; Washington, D.C.; Co-Spons: American Nuclear Energy Council, American Nuclear Society, American Public Power Association, Atomic Industrial Forum, Edison Electric Institute, National Rural Electric Cooperative Association and the U.S. Committee for Energy Awareness; Contact: AIF (301) 654-9260.
22-24	Conference: Sixth Annual Incineration Conference on Incineration of Mixed and LLRW; Pheasant Run Resort, St. Charles, Illinois; Spons: University of California in cooperation with DOE, IAEA, ASME, and chapters of the Health Physics Society; Contact: Charlotte Baker, LLW Projects Coordinator, University of CA, Irvine, CA 92717. (714) 856-7066. Telex: 7101 115 338.	5-7	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, Nevada; 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.
23	CHANGE: Hearing: House Interior Committee, Nuclear Power Reactor Decommissioning; Contact: Sam Fowler (202) 225-8331.	6-8	Annual Conference: The Hazardous Materials Advisory Council; Radisson Mark Plaza Hotel, Washington, D.C. Contact: (202) 783-7460.
23	Hearing: DOE HLW Program; Senate Environment and Public Works; (Witnesses include Sec. Herrington); Contact: Dan Berkovitz (202) 224-4039.	7	Hearing: Western Compact (AZ-SD); House Interior Committee; Contact: (202) 225-8331.
23	Meeting: Northwest Interstate Compact Committee; Portland, Oregon; Contact: Elaine Carlin (206) 459-6244.	11-15	Short Course: ASME Short Course on Radioactive Waste Management for Nuclear Power; Old Town Holiday Inn, Alexandria, VA; Contact: Gloria Greene (212) 705-7398.
27 week	Hearing: Appropriations of HLW program; Senate Appropriations Energy and Water Subcommittee; Contact: Proctor Jones (202) 224-7570.	TBD	(Spring 1987) Coordinated Research Program on High-Level Waste Forms; Australia; Spons: IAEA; Contact: W. Porter (202) 252-4573.
28-29	Hearings: NRC on HLW Program; Amendments to NWPA providing financial incentives to host state; (S. , Spons: Sens. Johnston, McClure); Senate Energy and Natural Resources; Contact: M. L. Wagner (202) 224-7570.	June	
28-30	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. Richland, Washington; 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.	16-19	THE THIRD ANNUAL RADIOACTIVE EXCHANGE DECISIONMAKERS' FORUM -- LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT: FACING THE NEW REALITIES -- Site Development; Long Term Liability; Economics; Public Acceptance. Grand Traverse Village, Valleyview Conference Center, Traverse City, Michigan. Registration: Exchange Subscribers: Prior to May 1 - \$595.00; After May 1 - \$635.00. Non-Subscribers: Prior to May 1 - \$650.00; After May 1 - \$690.00. Contact: (202) 362-9756.

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