
The

Radioactive Exchange®

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

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DOE TO MARKEY: DECISION ON 2ND REPOSITORY TO BE IN MISSION PLAN

MARKEY TO DOE: YOUR RESPONSE IS UNACCEPTABLE, DISTURBING, EVASIVE

In a July 14, letter to Secretary Herrington, Congressman Ed Markey, Chair of the House Energy and Conservation Subcommittee, termed DOE written responses to a list of questions he forwarded to the Secretary on June 5, regarding DOE's decision to halt the program to identify possible sites for the second repository, "unacceptable", "evasive" and "deeply disturbing".

In response to the Massachusetts Congressman's inquiry as to "How the Department can indefinitely postpone its responsibilities to select a site for the second repository," DOE provided the following statement:

"The Department intends to place the entirety of its proposal for continuing to carry out the second repository program before the Congress through an amendment to the Mission Plan required by the Nuclear Waste Policy Act. (See **Markey in the HLW Focus**)

HANFORD SITE USE REGS FINALIZED

On July 7, the Washington State Department of Ecology approved as final, regulations governing the payment of Hanford site-use surcharges for out-of-region generators. For the most part the final regs are as proposed in April (See EXCHANGE Vol. 5, No. 7). Changes include the requirement that waste shipped out of the Rocky Mountain and Southeast regions must be accompanied by certifications for export from their respective compact boards. **

SE COMPACT DELAYS HOST STATE SELECTION

As most observers expected the Southeast Compact Commission did not select the host state for the second regional LLRW disposal facility at their July 14 session. Instead the Commission voted to follow the recommendations of their Technical Advisory Committee to develop additional background data on the ranking.

Because of mixed legal opinions from their respective Attorney Generals, the Commissioners did not formally delay the selection of a host state, which according to provisions of the SE Compact was to have been completed in July 1986. (See **SE** pg. 2)

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(SE from pg. 1)

Instead the Commission directed their support Contractor - Dames & Moore - to provide the information recommended by the Technical Advisory Committee, and "recessed" the meeting to be reconvened at the call of the Chair rather than adjourn.

Dames & Moore informed the members that it would take at least eight to ten weeks to complete the tasks requested.

New Data Requested

The Commission adopted nine out of ten recommendations of the Technical Advisory Committee, regarding host state ranking background information.

The nine adopted were:

- Leave the coastal plains in, in all states, for consideration as a potentially suitable area.
- Instruct Dames & Moore to work with (officials) in North Carolina to reconcile apparent errors made in mapping lithofacies 3 and 4 in (the coastal plain of) North Carolina.
- Use the latest available geological data for all states, as of a date to be set by the Commission. Use this data to apply to the existing technical criteria, using no new or finer measurements.
- Instruct Dames & Moore to correct errors made in accounting for the Greenville-Spartanburg MSA in North Carolina's Potentially Suitable Area (PSA). Adjust the North Carolina PSA score according to Dames & Moore's recalculation.
- (Continue to) use the 1980 census data for all areas in all states (i.e. do not use the 1986 population estimate for Burlington, North Carolina.)
- Accept from Dames & Moore the corrected data for population density.
- Accept the 1980 U.S. Census data for square miles (by county) as reported (i.e. do not substitute the 1982 World Almanac data.)

- Do not use adjacent counties (for the calculation of population density.)
- Instruct Dames & Moore to examine the data referenced by North Carolina (for meteorology), and to report back to the Commission whether the data is measured in PET/P, and if so, whether it is: (1) as comprehensive as the Thornwaite reference; (2) available for all states; and (3) more recent than the Thornwaite data. Only if all these findings are positive, use the new data.

The one recommendation not adopted was to have Dames & Moore study their assumptions on wetlands and report back to the Commission as to the impact this consideration would make, if any. Instead the Board opted for a recommendation offered by SC Commissioner Stucker, directing Dames & Moore to incorporate wetlands considerations in coastal plain states in determining PSAs.

NC Action A Big Question Mark

During the "steamy session" the NC Commissioners recommended that the Board reconsider the action taken at the last session **not** to have Dames & Moore redo the technical report incorporating new volume projection data. The Board voted against the NC initiative to reconsider. After this vote the NC Commissioners left the session in order to return to the state to discuss future steps with the legislature and the Governor.

As was reported earlier (EXCHANGE Vol. 5 No. 11) North Carolina State Representatives had introduced legislation to rescind the states membership in the SE Compact if North Carolina was designated as the primary host state. The bill was stalled in Committee, but the day following the Compact Board decision, a move was made to bring the bill to the floor in the Senate and House, prior to adjournment on July 16. As of 10 p.m. on July 15, when this edition went to print, the bill still had not been brought up for floor action. There was at least a glimmer of hope that NC would remain in the Compact. **

NY ADOPTS LLRW SITING BILL; CUOMO ACTS TO COMPLY WITH LLRWPA

Just hours before the state would have been out-of-compliance with the (LRWPAA) July 1, 1986 milestone of the Low Level Radioactive Waste Policy Amendments Act and generators would have had to pay a double surcharge for the disposal of LLRW at the three currently operating disposal facilities, NY Governor Cuomo telefaxed letters to the responsible agencies of South Carolina, Washington and Nevada certifying that New York would take responsibility for the management of LLRW within its boundaries.

The Governor's letter of certification followed the adoption of a state LLRW permanent disposal facility siting bill by the New York Legislature. The bill had languished in the legislature for several months because of a disagreement between the Senate and Assembly regarding the inclusion of provisions requiring state permits for the transportation of LLRW (See EXCHANGE, Vol. 5, No. 10). However, the Governor then made it very clear that he would not certify that the state would take responsibility for the disposal of LLRW in order to comply with the LLRWPA July 1 milestone until the legislation was approved.

As adopted, the legislative package includes an amendment to the state energy conservation law requiring transporters of LLRW to obtain state permits and a separate bill specifying a comprehensive program to site, develop and construct a LLRW disposal facility. The siting legislation prohibits the use of a traditional shallow land burial in the state and the siting of any permanent burial facility at West Valley.

LLRW Transport Permits

The separate bill amending the state environmental conservation law requires that persons engaged in the transportation of LLRW through or within the State of New York obtain permits from the Department of Environmental Conservation. Exemptions

are allowed only upon a determination "that...such transport imposes no potential significant, adverse impact on public health, safety or welfare, the environment, or natural resources as determined of the department [of environmental conservation] in consultation with the department of health."

Site Selection Commission

The siting legislation establishes an independent Commission for siting low-level radioactive waste disposal facilities. This Commission is responsible for the selection of permanent LLRW disposal site[s] and the method of disposal. Members of the Commission are to include a geologist; a medical doctor; a health physicist; a professional engineer and a private citizen who is to be designated as the chairperson. Upon selection of a site or sites and a disposal technology, the Commission then submits their selections along with the necessary draft environmental statement to the Department of Environmental Conservation for certification.

The New York State Energy Authority is authorized to construct, operate and maintain the permanent disposal facility.

The bill stipulates that the disposal facility is to be in operation no later than January 1, 1993. Once the site is in operation the state is to take title of all waste disposed in the facility.

Outside Advisory Committee

An Advisory Committee to the Siting Commission is directed to be established. The members are to be appointed by the Governor and are to include the state geologist, the Commissioners of Health, Labor, the state energy office; two representatives from environmental interest groups, two health physicists, or medical doctors knowledgeable about radiation effects; two representatives of LLRW generators, a knowledgeable private citizen, and, when the draft environmental statement on the proposed site is issued, three citizens from the county within which

each proposed site is located.

Financial Support From Utilities

The entire facility siting program, including development, construction, and operation of the permanent disposal facility is to be financed by fees paid by all the users of the proposed facility. However, prior to the operation of the disposal facility, only the state's nuclear power generating facilities with full power operating licenses will be required to pay a fee to cover all funds appropriated to support the program.

An appropriation of 3.5 million dollars, including 1.5 million to support the Department of Environmental Conservation activities and 1.6 million to the newly established siting Commission is included in the legislation. **

BARNHART NAMED PRESIDENT OF CHEM-NUCLEAR SYSTEMS, INC.

Victor J. Barnhart has been elected President of Chem-Nuclear Systems, Inc., by the company's board of directors.

Peter H. Huizenga, chairman of Chem-Nuclear Systems, Inc. said Barnhart, formerly Vice President, Nuclear services, succeeds Michael J. Jump as president.

Barnhart, an engineering graduate of The Johns Hopkins University, has more than 20 years' experience in the commercial nuclear industry, holding a wide range of management positions in engineering, new product development, marketing and project management.

Mike Jump has been named a Vice President of Chem-Nuclear Systems, responsible for the Barnwell, SC low-level radioactive waste disposal facility, the company's involvement in the federal governments' Uranium Mill Tailings Remedial Action Project and Chem-Nuclear's site development activities.

In another move, Robert Hamilton, formerly with Quadrex, has moved over to Chem-Nuclear Systems, Inc. as Vice President in charge of marketing and nuclear operations.

US ECOLOGY REORGANIZES; SCOVILLE MOVES UP TO GROUP VP

Following plans agreed to at its last Board of Directors' and shareholders' meeting, American Ecology, the parent company of US Ecology has reorganized. Jerry Scoville, the President of US Ecology has been appointed Group Vice President of American Ecology. He will have direct responsibility for a newly reorganized group of US Ecology companies and recently acquired Associated Technologies Inc. (ATI) of Charlotte, NC.

The new set of US Ecology companies, each with its own President are as follows: US Ecology RAD - President Dr. Tom S. Baer; US Ecology CHEM - President Scott Bowen; US Ecology Consulting (Calif.) - President Ron Gaynor.

Dr. Baer and Mr. Bowen are newly appointed executives. Baer was formerly a Vice President with US Ecology when it was NECO. For the past several years he was with Bechtel Power at Three Mile Island. Mr. Bowen is a graduate of both Stanford Law and Stanford Business School. He was formerly a Vice President with the Cambridge Plan International, and had been a practising attorney specializing in environmental law.

New Board Members

The newly reorganized "Ecology" companies follows the spring appointment of two new American Ecology Board members: Dr. Dixie Lee Ray, the former Governor of the State of Washington and former Chairman of the Atomic Energy Commission, and Mr. Neal Orloff, a practising attorney and currently Director of the Cornell Center for Environmental Research. Mr. Orloff has also served as legal counsel to the President's Council on Environmental Quality and was an Assistant Director of the Environmental Protection Agency's Office of Federal Activities. The new Board members replace Bill Rutherford and Roy Fields who were Group Executives at Teledyne. The change in board membership completed the "formal" divorce of Teledyne from US Ecology. Bill Prachar, the President of American Ecology is now also the Chairman of the Board. **

STATES' HAZARDOUS WASTE PROGRAMS TO INCLUDE MIXED WASTE

In the July 3, Federal Register (pg. 24504) the Environmental Protection Agency issued a formal notice requiring all states authorized to regulate hazardous waste disposal under RCRA authority and those planning to seek this authority to include the regulation of mixed waste (hazardous & radioactive waste) within their program. The notice directs states that have already been delegated jurisdiction over hazardous waste one year (until July 3, 1987) to incorporate mixed waste into their regulatory scheme, if state legislation is not required, and two years if legislation is necessary. States intending to seek RCRA hazardous waste regulatory authority must now include provision for mixed waste. The notice advises that states with authorized programs may need only to obtain a legal interpretation from their Attorney General, stating that mixed waste is covered in their respective programs.

EPA-NRC Conflict

In the notice EPA calls attention to the possibility that federal and-or state RCRA regulations applied to mixed waste may be in conflict with Atomic Energy Act (AEA) (i.e. NRC) regulations over the same material. In this case, the notice advises that, the Agency or the state is to use the provision of Section 1006 of RCRA granting precedence to AEA regulations to modify the conflicting RCRA regulation. **

SYNAR BLASTS DOE & NATIONAL LABS ON HAZARDOUS WASTE CLEAN UP

In a hearing that lasted several hours on July 11, Oklahoma Congressman Michael Synar, Chair of the Government Operations Subcommittee on Environment, Energy and Natural Resources and his colleague Representative Bob Wise of West Virginia took DOE Assistant Secretary for the Environment Mary Walker, DOE National Laboratory personnel and even officials from South Carolina to task for non-compliance with EPA regulations over hazardous and mixed waste.

Walker Criticized

The first panel of witnesses included: Ms. Walker, accompanied by DOE staff from Defense programs, and personnel from Hanford and Savannah River Laboratories; and Assistant EPA Administrator Winston Porter, accompanied by various EPA staff. What ensued was another very critical blast at DOE's efforts to comply with RCRA and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) at two of the Department's s major nuclear processing facilities - the Hanford and Savannah Laboratories.

Hanford was the first facility to come under severe criticism for not taking action to meet RCRA or CERCLA deadlines regarding site identification and remedial action. DOE revealed over 800 CERCLA sites have been identified at national laboratory facilities, 338 of these sites are at Hanford. Assistant Secretary Walker, when questioned as to the number of sites and their status relative to CERCLA compliance, was unable to provide a sufficient response. As a result she was severely rebuked by the Chair. Mr. Synar made it quite clear that she was not cooperating with the Committee and expressed disbelief that she could appear at the hearing without the information the subcommittee requested. He again made note of Ms. Walker's unresponsiveness in closing remarks not only to those in the hearing room but to the viewing C-SPAN audience (Editor's note: The entire session was televised by C-SPAN).

EPA Posture On Federal Compliance

EPA officials made it clear that federal facilities were required to meet pollution abatement and remedial actions required by CERCLA and RCRA in the same manner as non-federal facilities. However, though Assistant Administrator Porter stated that EPA intended to treat DOE the same as non-federal organizations, he admitted that the Agency would not prosecute federal agencies for violations. Such action could not be taken, he explained, because of constitutional legalities.

State Oversight Scrutinized

The second panel of witnesses included officials from the State of South Carolina and the regional USGS and EPA offices. Both Congressman Synar and Wise tried to ascertain the level of cooperation between DOE and the state, and to uncover the extent to which there was the possibility that the Tuscaloosa Aquifer could be contaminated by organic toxic wastes from the Savannah River facility and the degree of contamination of other ground water resources.

USGS, EPA and South Carolina gave very detailed explanations of possible contamination problems. The South Carolina officials presented their testimony regarding their negotiations and agreements with DOE and Savannah River management, and ended up, being chided, to some degree, for not exerting enough regulatory oversight over laboratory hazardous waste disposal practices.

It was apparent to several observers at the session that Congressman Synar was not pleased with what he heard regarding the enforcement actions taken by South Carolina's Department of Health and Environmental Control.

Savannah Commitment To Comply

After three hours of severe criticism of DOE, Savannah River, and Hanford for their collective lack of action regarding compliance with CERCLA and RCRA, Bob Morgan, the DOE manager of Savannah River Operations, testified. He offered a brief oral statement, then somewhat surprisingly was not subjected to the intense grilling

that many expected. In response to Congressman Synar's question as to why certain ground water monitoring systems were not installed, he reported that they are currently being installed.

The hearing came to an end with the Operations Manager giving his personal commitment to Congressman Synar to abide by EPA rules and bring Savannah River Disposal Operations into full compliance.**

NRC ADMINISTRATIVE HEARING ON B&W REGIONAL INCINERATOR SET

With the past weeks, Dr. Oscar H. Paris, the NRC Administrative Judge responsible for conducting the administrative proceedings on Babcock & Wilcox's license application to site and operate a LLRW supercompactor and incinerator at their Parks Township site, issued an order expanding the issues that will be the focus of the proceedings and public hearing. The net result is that issues raised by intervenors that involve not only the incinerator, but also the operation of the supercompactor are to be considered in the proceeding.

In an order issued on June 23, Paris listed the fourteen separate issues to be considered. He also allowed that limited appearance statements may be submitted by interested parties during the proceedings and mailed to: Office of the Secretary, USNRC, Washington, DC 20555. The deadline for written testimony was set for August 1, 1986. Oral presentations are to be heard in early September. For copies of the order and a list of all fourteen issues write the above address. **

STATE COMPLIANCE WITH LLRWPA

According to sited-state officials, Vermont, Puerto Rico and Washington, DC have not submitted sufficient information regarding membership in a regional compact nor have their chief executives written a letter certifying that their government is taking responsibility for the LLRW generated within their jurisdictions. Therefore, the three remain out-of-compliance with the July 1, 1986 milestone of the Low Level Waste Policy Amendment Act and of their generators delivering waste to the currently operating burial sites must pay double the surcharge -- \$20.00 per cubic foot. Though Washington, DC's Council has adopted the Northeast Compact, it has not yet been admitted to membership, nor forwarded formal documentation to all the respective sites state agencies.

IN NEW ENGLAND

The **Massachusetts** LLRW Disposal Facility Siting Bill, now freed of the burden of provisions that would have required legislative certification and a public referendum on a LLRW disposal facility site, is in the State Senate Ways and Means Committee where its financial implications are being reviewed. The bill is expected to make it out of the Senate and into the House sometime in September.

IN THE NORTHEAST

Within the next three months, the **Northeast Regional Compact Commission** is expected to issue a Request for Proposals from outside contractors to assist the Commission in developing a Regional Management Plan. Washington, DC has formally ratified the Northeast Compact and has petitioned the Commission for membership. For information on Board activities contact the Commission Executive Director, Denise Drace at 609-984-1483.

IN THE MIDWEST

The new Executive Director of the **Midwest Compact Commission** is Greg Larson. Greg was formerly Director of the the State of Minnesota's Nuclear Waste Program Office.

IN THE NRC

MIXED WASTE The NRC's Office of General Counsel (OGC) has concluded that the Commission has the authority to require licensees to reduce the volume of mixed waste (radioactive RCRA designated hazardous waste) shipped for disposal at commercial LLRW burial facilities. In a memo submitted to the Executive Director of Operations (EDO), as had been requested (See EXCHANGE, Vol 5, No. 10), the OGC concluded that the NRC has the authority to require generators to treat waste streams to reduce to the "maximum level practicable," the amount of mixed waste, and to ban the disposal of mixed waste. This authority emanates from provisions already in NRC's regulation 10 CFR Part 61. The OGC endorsed waste management staff's recommended options proposing to develop the guidance to require such action (See EXCHANGE, Vol. 5, No. 6, or Secy 142-86). Pending Commission approval the waste management staff will begin developing the necessary guidance document. If work starts immediately a draft could be completed sometime in September, 1986.

One very interesting aspect of this possible NRC action is the extent to which the Commission could require the use of a specific processing technique (e.g., incineration) to reduce mixed waste streams because it is an available technology that will reduce mixed waste to the "maximum practicable" level.

On the same subject, the waste management staff briefed individual Commissioner's staff on their ongoing discussions with EPA regarding the possibility of resolving the current jurisdictional conflict over mixed waste without having to resort to new legislation. Apparently the staffs of both agencies have concluded that, from a purely technical standpoint a non-legislative solution can be achieved. The NRC staff is recommending that discussions continue with EPA to develop an administrative solution. However, the staff also advised the Commissioner's assistants that legislative action must not be completely ruled out as an option.

BRC WASTE The Executive Director has forwarded the staff recommended Below Regulatory Concern Commission policy position to the Commissioners for their review. The final staff recommendation parallels fairly closely what has been reported in previous editions of the EXCHANGE (SEE Vol. 5 Nos. 3, 11). The policy essentially sets out rulemaking procedures that will govern the NRC decisionmaking process to classify Below Regulatory Concern waste streams. Each individual request for a BRC determination regarding a specific waste stream will be handled as a separate rulemaking.

The Commission is expected to hold a public meeting on the staff recommendation. A final vote would be taken at that time. This final action will probably not take place until September or October.

IN THE INDUSTRY

Stock Equipment Company and **NUS Process Services** have just completed development of "Quick-Dry" dewatering and volume reduction technology. The technology provides: Volume Reduction - filter media/resin volume reduction ranging from 20% to 70%; Regulatory Compliance - exceeds the .5% free water disposal limit by a factor of 10 with a simple means of verification; Speed - liners can be dewatered and made ready for shipment in

less than eight hours. "Quick Dry" service is available exclusively from NUS Process Services. Equipment can also be purchased directly from Stock. The technology will soon undergo its first commercial application at a large east-coast BWR. For more information, please contact either Steve McCoy at NUSPSC or Paul Williams at Stock (216) 543-6000.

NUS Process Services has been selected as the radwaste transportation contractor for the initial Fermi-2 cask shipments. Detroit Edison will lease an NUS-14-170 Series 1 shipping cask from NUSPSC in July to ship six HIC's to Barnwell. The shipments will be carried by US Ecology under the joint working agreement in place with NUSPSC.

Associated Technologies Incorporated (ATI) of Charlotte, NC has been awarded a three year contract to "containerize" all the LLRW from the Palo Verde Nuclear Facility with their TVR III bitumenization equipment. The TVR III unit is on its way to Palo Verde after having processed LLRW on site for Illinois Power. ATI has a five year service contract for the TVR III with the Illinois utility. The TVR III is based on a process developed by SGN of France. ATI is licensed to market the technology in the U.S.

CALL FOR PAPERS

The 1987 International Waste Management Conference, November 30 - December 5, 1987, Kowloon, Hong Kong, is sponsored by the American Society of Mechanical Engineers in cooperation with the International Atomic Energy Agency and co-sponsored by the American Nuclear Society, Canadian Nuclear Society, Atomic Energy Society of Japan, Chinese Nuclear Society, Japanese Society of Mechanical Engineers, and the Nuclear Energy society, Republic of China. The European and Korean Nuclear Societies are also expected to be co-sponsors of the conference. Papers are solicited from the U.S. and internationally for the conference covering the following high and low-level radioactive waste management topics. **HIGH LEVEL WASTE MANAGEMENT:** Fuel Reprocessing; Back-end Fuel Cycle Economics; Monitored Retrievable Storage; Fuel Storage Experience at Reactor; Spent Fuel Conditioning and Rod Consolidation; Repository Issues. **LOW-LEVEL WASTE MANAGEMENT:** Liquid Radwaste Processing Experience; Solidified Waste Forms; Incineration--Development and Experience; Solid (DAW) Waste Processing; Recent Radwaste Processing Technology Development; Low-Level Waste Management Trends. Two copies of a 600-800 word summary are due to the Technical Program Chairmen by September 5, 1986, as they will be reviewed at the Niagara Falls, New York, Radioactive Waste Management meeting on September 18, 1986. Full papers will be due to the Technical Program Chairmen by February 18, 1987 for review at Waste Management '87 in Tucson, Arizona, March 1, 1987. Send **High-Level Waste summaries** to: Mr. A. M. Platt, Battelle Pacific Northwest Laboratories, P.O. Box 999, Richland, Washington 99352, USA. Telephone: (509) 375-2273. Send **Low Level Waste summaries** to: Mr. R. J. Tosetti, Bechtel National Inc., 50 Beale Street, P.O. Box 3965, San Francisco, CA 94119, USA. Telephone: (415) 768-0191.

(Markey from pg. 1)

This procedure will afford the Congress a thorough opportunity to review the second repository program through the procedures of section 301 (b) (3) of the Act."

"The relationship of this approach to other provisions of the Act dealing with the second repository program is directly implicated in two pieces of pending litigation. The government will address such legal questions in the course of the litigation, and thus we are not in a position now to prepare legal opinions bearing on the same subject".

The Congressman's letter asked DOE to respond to almost five pages of detailed questions. It included a request for a log of telephone calls and meetings with Congressman, and Governors prior to the site selection announcement. DOE provided an abbreviated log listing a variety of meetings with state officials and Governors and a telephone conversation with an aide to Vice President Bush.

Destruction Of Records Attacked

In the responses provided to the Mr. Markey, the Department stated that it could not provide requested "drafts" of documents, because early drafts were not retained when a new draft was completed. In response to this revelation Mr. Markey stated there were only two possible reasons for such action: either the Department was engaged in a coverup or incompetence had become "the hallmark of the program".

Highlights Of Other DOE Responses

In other responses to the Congressman's inquiries DOE

- revealed that the 60,000 comments on the second repository Area Recommendation Report would be catalogued but not analyzed;
- attempted to dispute any real advantages to extended fuel burn up
- expressed the view that the MRS "does provide, in part, some of the benefits of flexibility provided by adding a second repository to a single repository system", but then argued against viewing the MRS as "a replacement for the second repository";
- reported that all potential second round repository sites were now on the same basis as any other possible sites and
- emphasized that "the Department has not found any flaws in the administration and technical process of the Crystalline Project". **

DOE TO BEGIN SHIPPING DAMAGED TMI 2 CORE TO IDAHO LAB

Sometime near the end of July DOE is scheduled to begin shipping the damaged core of Reactor Unit 2 from GPU Nuclear Corporation's Three Mile Island nuclear facility to the Department of Energy's Idaho National Engineering Laboratory (INEL) in Idaho Falls, Idaho. GPU began loading parts of the damaged core of the reactor into casks during the first week of July. The material includes irradiated fuel particles, partial fuel rods, and assemblies and core debris such as cladding and

control rod materials. INEL will provide interim storage for the fuel in addition to carrying out an extensive research and development effort on the damaged core parts.

The removal and shipment of the core to INEL is in accordance with a Memorandum of Understanding between DOE and NRC and an agreement with GPU. Under the terms of the agreement, DOE is to take possession of the reactor core and GPU will pay the federal government \$7.3 million for transportation and interim storage costs.

Special Transport Containers

The TMI material will be transported via rail to INEL in specially constructed canisters. The canisters were designed and constructed by Nuclear Packaging Inc., of Federal Way, WA. They are NRC-certified as NuPac 125B shipping casks. Seven of these canisters will be transported in each shipment. Between 35 and 40 shipments will be transported by Conrail and Union Pacific Railroad during the next 2 1/2 years. Both Conrail and Union Pacific have had extensive experience in transporting hazardous materials.

The NuPac cask is comprised of two separate vessels. The stainless steel inner vessel includes a hub-and-spoke arrangement to support tubes which hold the loaded fuel canisters. The outer vessel has a composite wall composed of three thick layers of metal. The inner shell of the outer vessel is a cylinder of one-inch thick stainless steel. The outer shell is made of two-inch thick stainless steel. A four-inch space between the two shells is filled with lead for radiation shielding. Attached to each end of the outer vessel are large energy absorbers called overpacks. The overpacks are made of stainless steel and are filled with foam that crushes upon impact, absorbing impact energy and protecting the cask body.

The NuPac cask is designed to survive impact accidents without releasing its contents. A one-quarter scale model was subjected to a series of drop tests at the Sandia National Laboratory Transportation

Technology Center. According to DOE the results demonstrated conclusively that the casks were safe.

Transport Plans

DOE officials reported that the intervening states through which the trains will travel have all been contacted. Information is being provided on an "as requested" basis. The Department is fully abiding by NRC regulations, NRC prenotification requirements, plus its own procedures, -- the Courtesy Communication System, -- which enabled the DOE to successfully complete the shipment of spent fuel from Virginia Power's Surrey facility to INEL (See EXCHANGE, Vol. 5, No. 8).

Though officials do not intend to publicly reveal specific travel times or routes for security reasons, the EXCHANGE was informed that the designated Governor's contacts in the ten intervening states between Pennsylvania and Idaho have already been contacted regarding the proposed transportation plans. DOE reported that the selection of the final transport route was based upon three criteria:

- availability of the highest quality track;
- the quickest, shortest, and most direct route;
- movement through low-populated areas.

The first being the uppermost concern.

According to DOE, Illinois officials requested an opportunity to inspect the shipments and to provide an escort. The request was granted but the inspection will take place in Indiana so as not to delay the train. Ohio also requested an opportunity to inspect but may be satisfied with information from Illinois. Indiana officials have requested the information and results of the Illinois inspection. Pennsylvania officials have asked for extensive details on the shipment; Missouri is considering the possibility of carrying out their own inspection and Nebraska has requested prenotification. The other intervening states have made informal requests for general information. **

OTA FINDS SPENT FUEL CASKS SAFE EVEN IN SEVERE ACCIDENTS

A just-released comprehensive report on the transportation of hazardous materials completed by the U.S. Congress' Office of Technology Assessment finds that "even in severe accidents, the standards for nuclear fuel containers provide a high degree of public protection--much greater than afforded in any other current material shipping activity." The 250+ page document -- **Transportation of Hazardous Materials** -- is divided into four substantive chapters providing a comprehensive assessment of transport regulations, information systems, container safety, and training for emergency response. It is the result of a two year study undertaken by the OTA at the request of the Senate Commerce Committee and is endorsed by the House Committees with jurisdiction over transportation policy. The overriding conclusion is that "human error rather than equipment failure causes most accidents and spills of hazardous materials." An analysis of federal and state accident data completed as part of the study showed "that over 60% of all transport vehicle accidents and spills are caused by operator's mistakes."

Nuclear Waste Transport

With regard to the transport of radioactive materials, the report concludes that the primary problem areas are not technical but institutional and intergovernmental. It does caution, however, with regard to containers used for the shipping of spent fuel, that "meticulous adherence to the designs and specified procedures during cask manufacture and to required safety procedures during loading and transport are critical factors in ensuring public and environmental safety."

In order to improve the overall safety of spent fuel transportation, the OTA found that "fruitful areas for improvements...are to be found in the institutional, procedural and operational controls and arrangements, such as quality assurance, quality control measures, maintenance activities, operator, handler and driving training and inspec-

tion." Continued research is recommended in such areas as "the interface between the carrying vehicle and the casks...; additional and ongoing evaluation of real accident stresses as compared to those specified by the current regulations; and methods of extending accident modeling capabilities to encompass accidents more severe than those currently incorporated in the models."

In a separate section on spent fuel to be shipped for permanent disposal under the terms of the Nuclear Waste Policy Act (NWPA), the OTA concludes that once the new casks are NRC certified, "full scale demonstration tests could assist in gaining of public confidence," and that "organizations and individuals critical of the current transportation procedures should be included in planning for a test." However, the report then hastens to add that "it is wise to be realistic about the extent to which a full-scale cask accident demonstration would increase public understanding.... A well planned, constructed and staged full scale demonstration could prove persuasive to many, but no accident demonstration can show all the possible events for conceivable accidents."

The report calls attention to the strained relations between NRC, DOE and the states regarding spent fuel transport, noting in particular that the "greatest conflict between DOE and the states" occurs when DOE has exercised its authority "to use containers and procedures other than those certified by NRC." In order to lessen this conflict, OTA recommends a change in the "institutional attitudes of DOE and NRC," and comprehensive public information efforts, including the development of working relationships with public interest groups such as the National Governors' Association, the National Conference of State Legislatures, and the International Conference of Mayors.

OTA observes that despite the fact that gasoline "is by far the most frequently transported hazardous material and accounts for more annual damages than all others combined,...States and localities are most likely to regulate shipments of

hazardous wastes and highly radioactive materials, which together account for less than three percent of the total hazardous materials transported and are already heavily regulated by the Federal government".

Regulatory Inconsistency

OTA found significant inconsistencies between federal, state and local government regulations over the transport of all types of hazardous materials. An assessment of state hazardous material laws and regulations is recommended in order to ascertain the degree of inconsistency among regulations. OTA also suggests that Congress consider the expansion of regulations **"such as reporting requirements and container regulations to cover all intra-state highway transportation."**

Copies of the report "Transportation of Hazardous Materials", are available to the public at the U.S. Government Printing Office (GPO), Superintendent of Documents, Washington, D.C. 20402, Phone: (202) 783-3238. The GPO stock number is 052-003-01042-9. The price is \$13.00. **

ANS SPENT FUEL STORAGE POLICY: A NEED FOR CLARIFICATION

The American Nuclear Society recently issued a formal policy statement declaring that storage of spent nuclear fuel at reactor facilities or at away-from-reactor facilities is safe, and that DOE should adopt a waste acceptance schedule to preclude the need for utilities to provide storage capacity beyond January 31, 1998. The statement endorses the utilization of rod consolidation and dry cask storage techniques.

However, in a rather curiously worded concluding statement the position endorses "providing Federal interim storage capacity **(via an MRS)**" if NRC makes a determination that a utility could not develop the necessary capacity. It is noted that the Nuclear Waste Policy Act "authorizes" DOE to provide storage capacity in this manner.

If the parenthetical phrase (via an MRS) had not been included, the statement would be an endorsement of the provisions of the NWPA. However, the inclusion of this phrase reflects either a misunderstanding of DOE authority to provide storage capacity or is intended to endorse **only** the MRS as a means of providing federal storage capacity.

The NWPA does give DOE the authority to provide federal capacity upon NRC determination that such capacity is necessary. However, this merely refers to providing capacity under the Federal Interim Storage program at existing federal facilities. It is not an authorization to provide capacity at the MRS. The MRS is not authorized under the NWPA. DOE must submit a proposal seeking such authorization to Congress. The policy position does seem to reflect this reality in its background discussion but not in this concluding statement.

Does this ANS position then imply the notion that federal interim storage at an MRS is fully supported but, possibly, other means of federal interim storage are not? The ANS needs to clarify this position. **

OCRWM DECIDES AGAINST ISSUING SECOND ROUND OF PRDA RFPs

The Office of Civilian Radioactive Waste Management had decided not to issue a second round of Request for Proposals for follow on projects to the initial Program and Research Development Awards. Instead OCRWM staff report that concepts developed in the initial projects that were found to be worth pursuing will be studied further under various other R&D efforts. For example further work on a dual purpose cask, the subject of an initial PRDA will be sought under a Transportation Cask Acquisition RFP (SEE RFP Announcement in this issue.) Two other concepts identified as worthy of further work -- seals, and enclosures for casks, and a small cask to allow the transfer of spent fuel from pool storage to a large cask -- will be investigated by Sandia Laboratory. **

IN THE CONGRESS

PRICE-ANDERSON As expected, Senator Alan Simpson's Subcommittee on Nuclear Regulation reported out S 1225, Price-Anderson Reauthorization legislation, on June 25 without much difficulty (See EXCHANGE, Vol. 5, No. 11). The next step -- markup by the full Senate Environment and Public Works Committee Chaired by Robert T. Stafford of Vermont -- is the most difficult. No date for markup has been set as this edition goes to print. Staff is tentatively planning for about the first week in August. It is the belief of many that the legislation will not make it through the full committee prior to adjournment for elections.

Congressman Ed Markey, Chairman of the House Energy Conservation and Power Subcommittee will convene a hearing on reauthorization of Price-Anderson on July 17. Witnesses will include NRC Commissioners, DOE officials, including OCRWM'S Ben Rusche, and representatives of the utility and insurance industry. The Subcommittee plans a markup session the following week. The markup vehicle has yet to be determined. Witnesses at the hearing have been asked to address the version of the Reauthorization reported out of the Interior Committee (HR 3653).

On July 24 the House Science and Technology Energy Research Subcommittee will be marking up the sections of the Reauthorization bill under their jurisdiction. This amounts to all the provisions of the bill except for Section 2. The markup vehicle will be the Interior version (HR 3653).

According to staff, **Congresswoman Marilyn T. Lloyd**, the subcommittee chair, will offer an amendment to the Interior version to eliminate language which has the U.S. Government accepting "unlimited liability" for incidents involving the HLW program. She is also expected to propose an amendment that would prohibit punitive damage awards under the Price-Anderson scheme. This was initially proposed within the Interior Committee but was defeated because of questions regarding the possibility that NRC licensees and DOE

contractors would then face "unlimited liability" for punitive damages.

Washington **Congressman Morrison**, who is a member of the subcommittee, can be expected to oppose the chair's proposal to limit DOE liability for waste activities. The full **Science and Technology Committee** is scheduled to convene a markup the week following subcommittee action. According to the referral agreement, Science and Technology and Commerce must report out a marked up bill by August 11.

CONGRESSIONAL HEARINGS On July 22, Tennessee Congresswoman Marilyn Lloyd is convening a hearing of the **House Science and Technology Subcommittee** on Energy Research and Production on DOE's selection of sites for the first HLW repository and the decision to delay the second repository program. Witnesses will include OCRWM Director Ben Rusche, officials from the states selected to host the first repository (TX, NV and WA), representatives of the Indian Tribes and executives from the utility industry. For further information contact (202) 225-2884. Prior to the hearing Congressman Morrison (R-WA), a ranking minority member of the subcommittee, is expected to introduce a bill proposing that DOE restructure the entire HLW repository selection process.

CORRECTION Our apologies to Wyoming Senator Alan Simpson who was referred to in the last issue of the EXCHANGE as Senator Wayne Simpson.

HLW PROGRAM APPROPRIATIONS As the battle lines over Appropriations for the MRS and Second Round Repository Program were being drawn, with the House Appropriations deleting funds for both, a new Appropriations confrontation was shaping up on FY 87 funds for the entire HLW program. Just prior to Congress leaving Washington for the July 4 recess, initiatives began to surface in both the Senate and House to delete funding for FY87 for the entire HLW program. Senator Laxalt is leading the charge in the Senate. In the House various Congressmen from potential first round states (WA, TX, NV) are deliberating on the utility of the move.

No one contacted by the EXCHANGE was willing to divulge any strategies on how a floor amendment to delete the HLW funds will be raised. One would think that Interior Chairman Udall's view of the action will weigh heavily on whether it is seriously undertaken or has a chance of being adopted. As this edition went to print the Interior Chairman had given no indication of supporting the initiative.

Though the proposal at first reflected the parochial interest of various Congressmen who were "intent" on demonstrating their "anger" at DOE's selection of the three potential sites and dropping the second repository, several other key congressional leaders apparently have indicated a measure of interest in the maneuver, in order to reestablish Congressional jurisdiction over the program. Over the past several weeks supporters and detractors of the program have repeatedly criticized DOE for delay in the second round repository program, calling the action a direct violation of the Nuclear Waste Policy Act.

There is also some sentiment that a strong "hands-off" the HLW Program signal ought to be given to the White House from wherein the decision to drop the second round repository came.

IN THE STATES

The **Western Governors' Association** whose membership includes Chief Executives of CA, WA, OR, HI, WY, MN, CO, UT, NM, AR and ID, and the **Western Association of Attorney's General** have adopted policy positions recommending that Congress suspend all work on the selection of a site for the first geologic repository and start a new national site screening process or restore funding for the second repository site selection program.

IN THE OCRWM

DEFENSE HLW FEE DOE officials report that Department recommendations on the Defense Program's contribution to the Nuclear Waste Fund to cover the costs of disposing of defense waste in commercial repositories is being held up again. This

time the Defense Program management is at fault, not OMB.

HLW TRANSPORTATION: The HLW Transportation Institutional Plan is expected to be released within the coming week(s) -- definitely by the end of July.

CONTRACT NEGOTIATIONS: According to statements made by OCRWM Director Ben Rusche, the Department is going to abide by the General Accounting Office recommendation (See EXCHANGE, Vol. 5, No. 11) and reopen final negotiations on the OCRWM Technical Support Contract with both Roy Weston and NUS. NUS had filed a protest with GAO on DOE's decision to award the contract to Weston. GAO ruled in favor of NUS.

IN THE NRC

REDEFINITION OF HLW The Waste Management staff has recently forwarded a memo to the Executive Director for Operations (EDO) recommending that the effort to develop an Advanced Notice of Proposed Rulemaking (ANPR) regarding the definition of high level nuclear waste, as directed by the Nuclear Waste Policy Act be resurrected. If approved, the earlier staff drafts of a recommended ANPR on a redefinition will be changed to reflect provisions of the Low-Level Radioactive Waste Policy Amendments Act which stipulate that all waste above currently designated Class C waste is the responsibility of the federal government. There does seem to be some doubt as to whether the signal to proceed will be authorized.

DRY CASK STORAGE Virginia Power's license application to store spent fuel in dry casks at the Surry Nuclear Facility has been approved by the Nuclear Regulatory Commission. The cask that will be used is the German manufactured GNSI cask marketed in the U.S. by Chem-Nuclear Systems, Inc.

AT INEL

DRY CASK STORAGE PROJECT As reported in a previous issue of the EXCHANGE, 69 spent-fuel assemblies from Virginia Power's

Surry Nuclear Facility have been delivered to the Idaho National Engineering Laboratory (INEL) to be utilized in the DOE Dry Cask Storage Demonstration Project.

Carl Gertz of DOE stated that this long-term life cycle test will:

- o provide heat transfer, radiation shielding, and potential gas generation data;
- o provide experience that may identify potential cask design improvements, enhance predictive modeling, and confirm that fuel integrity is maintained over time;
- o establish the economics of dry cask storage;
- o develop a generically applicable storage technology that would enable the NRC to license spent-fuel dry storage by rule.

Incremental temperature measurements were performed during the final stages of cask loading to ensure that predicted temperature limits would not be exceeded with the cask in a fully loaded condition.

The fully loaded casks were subjected to a comprehensive test matrix including both vertical and horizontal cask orientation within a vacuum and with Helium and Nitrogen cover gases. Temperature, radiation, pressure, and gas sample data were collected. Upon completion of the test matrix the GNS Castor V/21 and the Westinghouse MC-10 casks will continue with periodic measurements of these parameters for a year then monitored by a long term surveillance program until final disposal in about 1998.

The Transnuclear TN-24P cask has been

selected for consolidated fuel testing in FY-87. The fuel assemblies from this cask will be removed, and along with additional assemblies from Virginia Power and the Nevada Test Site, consolidated at the INEL then reinstalled in TN-24P. A complete series of tests on the cask containing consolidated fuel will be performed, followed by a monitoring program and long term surveillance as described above for the other two storage casks.

Mr. Gertz recently announced that a fourth, yet to be identified cask, will be used for additional consolidated fuel testing. Virginia Power will perform the consolidation process at the Surry Nuclear Power Station Pool and provide the fuel in canisters. INEL will load the canisters in the cask and perform the testing.

ON THE MOVE

Frank Gillespie has been appointed Director of Technical Programs Management at Battelle's Columbus Division, one of six groups within the organization's Technology Management Center. In his new position, Gillespie will pursue potential facilities being made available for private management by the federal government and industrial initiatives.

Prior to joining Battelle, Gillespie worked at the U.S. Nuclear Regulatory Commission (NRC) for 11 years. His experience has included inspecting nuclear facilities in regional offices, performing as the staff director of the NRC research office, and assuming programmatic responsibility as a technical division director with a \$50 million budget.

- - DOE REQUEST FOR PROPOSALS - - SPENT FUEL CASK DESIGNS

If all goes according to the current schedules, DOE will issue Request For Proposals on or about July 31, 1986, to develop designs for ten casks for the transport and storage of spent nuclear fuel destined for final disposal at the HLW geological repository. The issuance of the RFP's is being carried out according to the DOE Transportation Business Plan released earlier (See EXCHANGE, Vol. 5, No. 2). According to this plan, the to-be-released RFP's will seek design proposals for ten casks in four design categories, for PWR and BWR assemblies. The categories are: a legal weight truck cask; an overweight truck cask; a barge or rail cask; and a dual (storage or transportation) cask.

Calendar

July

- 17 Meeting: Central Midwest Compact Commission, State Capitol, Room 400, Springfield, Illinois; 10:30 a.m.; Contact: Teresa Adams (217) 546-8100.
- 17 Hearing: Price-Anderson Reauthorization, House Commerce Subcommittee on Energy Conservation and Power; Contact: Jerry Waldren, (202) 226-2424.
- 20-23 Conference: ASME/ANS Bi-Annual Nuclear Power Conference, Safe and Reliable Nuclear Power Plants; Philadelphia, PA.; Spons: American Society of Mechanical Engineers, American Nuclear Society; Contact: Dave Ciarlong, Philadelphia Electric Co., 2301 Market Street, Phila, PA 19101, (215) 841-4807.
- 22 Hearing: House Science and Technology Subcommittee on Energy Research and Production; Chair: Rep. Marilyn Lloyd; HLW Program Decision-making; Witnesses: Ben Rusche, state officials; Contact: (202) 225-2884.
- 22-23 Seminar: Packaging and Transportation of Radioactive Waste Material; Louisville, KY; Spons.: U.S. Ecology; Regis: \$425; Contact: Peggy Thompson, (800) 626-5334.
- 23 Meeting: Northwest Interstate Compact Committee; Shee Atika Lodge, Sitka, Alaska; 9:30 am to 3:30 pm. Contact: Terry Russeman (206) 459-6670.
- 23/24 (Tentative) Mark-Up: Price-Anderson Reauthorization, House Commerce Subcommittee on Energy Conservation and Power; Contact: Jerry Waldren, (202) 226-2424.
- 23-24 Meeting: OCRWM Quality Assurance Coordinating Group, Denver, CO; Contact: Carl Newton (202) 252-9300.
- 24 MARK-UP: Price-Anderson Reauthorization (HR-3653); House Science and Technology Subcommittee; Contact: Lou Ventre, (202) 225-2981.
- 25 ORAL ARGUMENT: MRS Proposed Injunction and Tennessee Suit against DOE; Sixth Circuit Court of Appeals.

- 28 Meeting: State and LLRW Regional Compact Officials, Boston, MA.

August

- 1st/2nd week Tent. Mark-Up: Price-Anderson Reauthorization: Senate Environmental and Public Works; Contact: Jim Curtiss, (202) 224-2991.
- 4-8 Annual Meeting: National Conference of State Legislatures; New Orleans, LA; Contact: Cheryl Runyon (303) 623-7880.
- 11/12 DEADLINE: House Commerce and House Science and Technology final action on Price-Anderson Reauthorization (HR-3653).
- 15 CONGRESSIONAL RECESS
- 21-22 Conference: Below Regulatory Concern LLRW; Inner Harbor Hyatt Regency Hotel, Baltimore, MD. Spons: EPRI; Contact: Steve Schulin, (301) 964-6000.
- 25-27 Seminar: High-Level Nuclear Waste, Washington, D.C., Spons: Westinghouse Electric Corporation, Waste Technology Services Division; Contact: Dr. Yolanda Willis, (412) 722-5728.

September

- 7-10 Conference: Second International Conference on Radioactive Waste Management; Winnipeg Convention Centre, Winnipeg, Manitoba, Canada; Spons.: Canadian Nuclear Society; Co-Spons.: American Nuclear Society; Contact: D. D. Shipler, NUS Corporation - (803) 649-7963; Dr. T.S. Drolet, 2700 Lakeshore Road West, Mississauga, Ontario, Canada, L5J 1K3; (416) 823-6654, TLX: 06-982333 or Eva Rosinger, Canadian Nuclear Society, 111 Elizabeth St., Toronto, Ont., Canada, Cable: 0623741, CAUCA.
- 8 CONGRESS RETURNS FROM RECESS.

(Changes from previous calendar in bold print)

UPDATE

STATUS OF UPCOMING REPORTS AND MILESTONES OF THE OCRWM (7/15/86)

Proposal for Defense Contribution to the HLW Fund -- (?) Now delayed by Defense Programs.

**Release for comment of Draft Amended Mission Plan, to Reflect Decision)
to "Delay" Program to select Site for Second) 8/1 (?)
Repository,)**

MRS Proposal -- Submission to Congress prohibited by Court Order. Oral arguments in Sixth Circuit Court of Appeals scheduled for July 24.

Report To Determine P-A Liability Limits For HLW Repository -- Apparently dropped by DOE.

Issue Transportation Institutional Plan -- 7/31/86.

Issue Program-Level Financial Assistance Guidelines -- ??

Issue Request for Proposal (RFP) for Transportation Cask Development -- On or about 7/31/86.

Issue RFP for Phase II Program Research and Development Announcement Follow-On Projects -- No RFPs to be issued; some initial projects are being continued.