

The

# Radioactive Exchange®

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

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Volume 5 Special Bonus Edition

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## EXCLUSIVE INTERVIEW WITH OCRWM DIRECTOR BEN RUSCHE....

**Rusche:** "When I said at the Markey hearing that I made the recommendation [referring to the second repository program]...that's precisely what I mean.."

### On The Action Of The Senate Appropriations Committee...

**Rusche:** "Obviously Congress is expressing it's view as to what the pace and conditions of the program ought to be. I would say that at this level Congress is certainly not saying "Keep the program going at the same pace..""

...Complete Interview in the HLW Focus ... pg. 9

## SENATE APPROPRIATIONS CUTS DOE HLW BUDGET REQUEST IN HALF INTENT IS TO STOP SITE SELECTION WORK

The battle royal expected in Senate Appropriations between Western state Senators representing the second round states and a possible partisan fight over the funding of the HLW site selection activities, ended up being a "let's cut the DOE budget party," with DOE taking a 50 percent slash in their budget request for the HLW program.

The final action was taken by the Committee on Wednesday, August 13, after a one day delay. Initially the markup was scheduled to be held on Tuesday but a proposed amendment by Senator Rudman to completely scuttle all second round activities, and the supposed development of an unacceptable compromise by one Western Senator, made the chair a bit uneasy. Therefore the Tuesday session was cancelled. Working late into the day and far into the night a compromise proposal was developed. The key players were Senator Hatfield and Johnston.

(See **Appropriations** in the **HLW Focus** pg. 5)

## **SE GOVERNORS DIRECT SE COMPACT COMMISSIONERS TO SELECT HOST STATE**

At their "summit" conference in Charlotte, N.C., the Governors of the states that are party to the Southeast Compact directed the Southeast Compact Commissioners to select a host state for the second regional LLRW disposal facility by September 12. Six of the eight state Chief Executives attended the session. Mississippi and Alabama Governors sent personal representatives.

The group also directed the Commissioners to review the data on regional LLRW generation developed by the State of North Carolina, prior to agreeing to the final "technical scores" allotted each state in the technical scoring procedure carried out by outside contractor, Dames & Moore. North Carolina's request to have the Commissioners review their data was rejected by the Commissioners at their last formal meeting (See EXCHANGE Vol. 5 No. 12).

According to reports from several individuals who have either duplicated North Carolina's data, or conducted their own evaluation of waste volumes in the region, it is readily apparent that North Carolina continues to end up at the top of host state list.

The Commissioners are now to apply the consensus weighting criteria to the technical scores and vote on the second regional host state. This should end up being North Carolina.

### **Keeping the Host in the Compact**

In addition to agreeing to have the Commission proceed to select the host for the second regional facility, the Governors established a subcommittee chaired by Governor Riley, with the Governors of Tennessee and Florida as members, to develop recommendations on how to keep a state from breaking away from the compact once it was designated as a host state. The three are expected to meet sometime during the National Governors' Association Annual meeting in Hilton Head, SC from August 23-25. \*\*

## **NRC "WORKING DEFINITION" ON MIXED WASTE BEING DEVELOPED**

By September 30 the NRC staff is expected to present to the full Commission a "working definition" of mixed waste that is intended to provide guidance to licensees on how to identify mixed waste streams. The completion of this practical guide is one of various tasks that the staff has committed to complete by the September 30 date.

Among the other items scheduled for completion and presentation to the Commission are an update on the issues that have been resolved with EPA and recommendations on the need for possible further action.

### **Future Actions**

The planned issuance of the "working guide" to managing mixed waste, following Commission review, is but one of a series of steps that the NRC staff is scheduled to take over the next year. However, as far as the EXCHANGE has been able to determine there are currently no plans to propose a new comprehensive definition of mixed waste that would set minimum levels of contamination of either radioactive or hazardous waste that could be used to possibly categorize a "mixed waste stream" as either primarily radioactive or primarily hazardous, thereby falling under either RCRA or NRC regulation.

Under current EPA regulations a waste stream containing a RCRA-designated substance and radioactive waste is a mixed waste. \*\*

## **FORMER FERNALD EMPLOYEE REVEALS DOE LACK OF REGULATION, QA AT FACILITY**

In a startling and shocking statement before Congressman Markey's Energy Conservation and Power Subcommittee on August 12, Mr. Daniel J. Arthur, a former Fernald employee, presented a sweeping indictment of contractor quality assurance programs and DOE oversight at the Energy Feed Materials Production Center facility in Fernald, Ohio. Mr. Arthur was employed at the facility as a Methods Analyst-Lead-

Auditor from May 1984 to March 1986. His planned appearance was kept secret until the day before the hearing.

The former Fernald auditor began his statement with a striking description of how he found the floors and work areas at Fernald operations buildings covered with "layers of uranium dust, magnesium fluoride, green salt, orange oxide and uranium saw chips," when he reported for work. He informed the Committee that he found "no comprehensive audit program in place" and was not allowed to "pursue audits in certain critical areas of plant operation." His statement detailed poor and potentially dangerous management practices in several areas, including the processing and transportation of radioactive waste.

His revelations are particularly significant for two reasons. First, DOE officials did not refute his devastating testimony; and, second, the reported degree of laxity or non-existence of DOE oversight over the contractor's quality assurance program, (which is the operating arm of the Department self-regulatory program) will heighten Congressional interest in enacting legislation that would no longer allow DOE the authority to regulate its own nuclear facilities.

One bill that could achieve the latter objective is Congressman Wyden's proposed legislation HR 4848, which would give EPA jurisdiction within federal nuclear facilities. It was successfully reported out of the Congressmen Markey's Energy Conservation Subcommittee on Thursday, August 14 on a strictly partisan vote (See story below).

### **Waste Incidents Described**

In his testimony Mr. Arthur provided specifics on two radioactive waste management practices that would have affected public health and safety far beyond the physical boundaries of the facility. According to his statement, while doing an audit in 1985 he discovered that radioactive waste was being burned in an incinerator licensed only for solid non-radioactive

materials. "Management promised to correct the situation," he reported, "but when I followed up to check corrective actions I found that they had not corrected the situation." He then added that in May of this year the Ohio EPA shut down the incinerator because they discovered radioactive ash.

Another waste management related incident concerned the shipment of radioactive materials in "T-hoppers" from Fernald to the Hanford LLRW disposal facility. Arthur was charged with investigating the overall transport operation following a DOE investigation into an incident involving the arrival of an externally contaminated Fernald "T-hopper" at Hanford. DOE completed the investigation, submitted a report to Westinghouse and instructed them to comply with the report's recommendations. Within a month Westinghouse sent DOE a letter guaranteeing that they were in compliance. However in his follow-up audit Arthur found "fourteen areas that were deficient" and on February 18 Hanford reported receiving "another contaminated T-hopper from Fernald."

### **Charges DOE Audits Non-existent**

The former Fernald lead auditor revealed in his closing remarks that to his knowledge during the two years he worked at Fernald "a DOE representative never audited our procedures or set foot in our office, even though our department was in charge of upkeep of all procedures. DOE had a very low profile at Fernald."

DOE officials at the hearing did not attempt to challenge Mr. Arthur's testimony or his credibility. In fact, the DOE site manager, Mr. Reafsnyder, responded that he would fully investigate Mr. Arthur's charges and circumstances that led to his resignation.

### **MARKEY COMMITTEE CLEARS BILL TO PUT DOE FACILITIES UNDER EPA REGULATIONS**

On Thursday August 14, Congressman Markey's Energy Conservation and Power Subcommittee reported out legislation, HR 4848, initially introduced by Congressman Wyden of Oregon, that would if enacted,

place DOE nuclear facilities under EPA regulation. The legislation was adopted by a 10-6 partisan vote after a substitute offered by ranking Republican minority member Congressman Moorhead was defeated by the same vote margin.

Congressman Moorhead's substitute allowed DOE to continue to self-regulate its nuclear facilities but would have required the periodic reports to Congress.

#### **Would Overturn By-Product Definition**

The Bill finally reported out by the subcommittee was a substitute amendment offered again by Mr. Wyden. It would:

- authorize EPA to develop a separate set of regulations governing radionuclide releases from DOE nuclear facilities.
- gives EPA full authority to administer and enforce the regulations.
- allows EPA to sue DOE for non-compliance.
- prohibits exemption of hazardous waste streams from RCRA regulation because of the presence of Atomic Energy Act-defined by-product materials in the waste stream.
- removes existing federal government 'immunity from prosecution' protections.

The provision allowing for RCRA regulation of hazardous waste streams would overturn DOE's proposed by-product definition, which has just been incorporated into the recently executed EPA-DOE-State of Colorado Compliance Agreement covering Rocky Flats. \*\*

#### **UPDATE..EPA ACTION ON TOXIC EMISSIONS FROM INCINERATORS**

The August 11, edition (Vol.5 No. 13) of the EXCHANGE reported that the Natural Resource Defense Council, and the states of New York, Connecticut and Rhode Island filed petitions with EPA calling for the regulation of toxic pollutant emissions from municipal incinerators. Over the past week the EXCHANGE has had the opportunity to discuss these actions with the pertinent EPA headquarters staff and has been given the following information:

- o The action taken by NRDC, EPA and at least one of the petitioning states, New York, is the direct result of a court settlement agreement reached in May of this year regarding a suit filed by the petitioners in October of 1984.
- o The initial suit sought EPA regulation of polycyclic organic materials (POM).
- o In the settlement of the suit, NRDC agreed to petition EPA for regulation over the sources of POM's and EPA agreed to issue a regulatory decision.
- o The sources of POM's identified in the settlement were municipal incinerators and coal-fired boilers.

In order to develop the necessary background material for decisions agreed to in the settlement of the suit EPA staff is conducting a comprehensive study of the pollutant emissions problems with the intent of completing the effort by the spring of 1987. Then, based on the review of this report, a regulatory decision will be rendered.

#### **Action Could Affect LLRW Incinerators**

This regulatory initiative could have a significant impact on state and-or federal air quality permit issuance for proposed centralized LLRW incinerators. \*\*

(Appropriations from pg. 1)

The critical elements were that no specific language would be included in the Committee report delineating just what specific programs DOE would cut, but that the cut would be deep enough to make it practically impossible to carry out any site selection activities.

The compromise language, introduced by Chairman Hatfield and adopted by a unanimous vote, is as follows:

"The Committee..... provides \$380,000,000 for the Nuclear Waste Disposal program. This funding reduction is to be applied against the entire program efforts including site-specific activities for the first and second waste repositories and site-specific work at a monitored retrievable storage facility which is neither authorized nor funded."

Senator Johnston followed the Chair's opening remarks endorsing the Committee's action.

#### **Laxalt Flails DOE**

Upon approval of the cut, Senator Laxalt took the opportunity to express his views of the Committee action and DOE's program. In his commentary he recalled how he has continually been told that DOE's work is sloppy, the staff arrogant and the selection process makes no sense. He reminded the members of the twenty-three law suits that have been filed challenging various DOE activities. In closing he remarked that in his view it was "highly improbable that high level nuclear waste would ever be disposed

of in the continental U.S." and suggested that an international repository should be considered. \*\*

#### **DOE ESTIMATE OF MRS COSTS MUCH TOO LOW SAYS GAO**

The EXCHANGE has learned that a just completed GAO analysis concludes that DOE's cost estimates for the Monitored Retrievable Storage facility (MRS) are "much too low". Furthermore, the GAO is said to conclude that in later years, the costs associated with an MRS could warrant an increase in the 1 mil per kilowatt hour HLW fee.

Though, the EXCHANGE was unable to obtain a copy of the report which is to be released shortly in the form of a GAO fact sheet, it has been determined that GAO attributes the low estimates to DOE not including the costs associated with state and local government impacts.

The analysis was conducted at the request of Congressmen Udall and Markey but the staffs of either Congressmen would not reveal the contents of the report or confirm our information regarding its conclusions. \*\*

#### **NRC SAYS YEAR DELAY IN HLW PROGRAM NO PROBLEM**

In an August 12 letter responding to an inquiry from Senator Bennett Johnston, Acting NRC Chairman Thomas Roberts states that "the Commission believes that a temporary legislative suspension, even as long as one-year, of DOE's site-specific repository development work, need not

necessarily affect its waste confidence decision, the licensing or the continued operation of commercial nuclear power plants."

In an August 5, letter the Senator requested the Commission's views on what the impacts of a delay in the HLW schedule would be on " 1) its decision in the 'Waste Confidence' proceeding on the availability of spent fuel storage or disposal as a consideration for commercial power reactor licensing; 2) the prospects for issuing operating licenses to the 26 nuclear power plants now under construction; 3) the continued operation of the 101 nuclear plants with operating licenses; and 4) the Commission's research and regulatory development programs in the high-level waste area."

Though the overall response is qualified, in that the Acting Chairman says that the effects of a delay are unpredictable, the view expressed on all points is that the program will not be seriously impaired.

#### **Waste Confidence Decision Cited**

In support of the statement that a one year suspension would not affect the Commission's waste confidence decision, Mr. Roberts cited portions of the published decision wherein the Commission:

"found reasonable assurance that one or more mined geologic repositories for commercial high-level radioactive waste and spent fuel will be available by the years 2007-09." And..."found reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impact for at least 30 years beyond expiration of that reactor's operating license, either onsite or offsite, and that safe independent spent fuel storage capacity will be made available, if needed."

The Acting Chairman added that:

"The Commission believes that timely attainment of a repository does not require DOE's program schedule to adhere strictly to the milestones set out

in the NWPA over the ... duration of the repository development program. Delays in some milestones as well as advances in others can be expected."

#### **NRC Work May be Suspended**

In response to the last issue raised in the Senator's letter, regarding NRC's research programs, Commissioner Roberts provides the view that the "NRC would likely suspend activities related solely and specifically to the review of those DOE site-specific activities for which DOE may not spend funds in the fiscal year in which the suspension is in effect." \*\*

#### **ENVIRONMENTAL STUDY FAULTS SAVANNAH RIVER LAB ON DISPOSAL PRACTICES**

The final report of a five year study conducted by the Environmental Policy Institute (EPI) of Washington, D.C. contends that "the 300 square mile site [of the Savannah River Plant (SRP)] and the shallow aquifers above the Tuscaloosa are so severely contaminated that it is reasonable to conclude that it has been treated by the federal government as a national sacrifice area for the U.S. nuclear weapons program." According to EPI, the study is based on official records that have been released to the public by DOE or obtained by Freedom-of-Information-Act requests.

The authors of the report, Argon Makhijani of the Capital Institute of Technology, and Robert Alvarez and Brent Blackwelder of EPI, charge that the "management at SRP (both DOE and its contractor, Dupont) have cut corners and chosen cheaper and riskier options" in dealing with the liquid, high level defense wastes stored in tanks at the facility. As of August 1 South Carolina Governor Riley's staff had not received copies of the report and therefore had no comments. SRP Manager Bob Morgan explained that the report is currently being reviewed by Dupont at DOE's request. This review is expected to be completed by mid-August and released to the public.

## Key Findings And Conclusions

itled "Deadly Crop In the Tank Farm", the report emphasizes that most of the SRP facility is obsolete and its design entirely inadequate for currently performed activities. The authors contend that radioactive and toxic non-radioactive materials have contaminated the aquifers beneath SRP, and that, "in twenty years compared to the predicted time of hundreds of thousands of years," plutonium has migrated into the groundwater. DOE and Dupont are faulted for continuing to routinely discharge toxic and radioactive materials into the soil despite the contamination problems.

With respect to the long term management of the liquid HLW in the tanks and the plan to glassify this waste, the report finds that the glassification plans..."face some serious problems." Instead of recommending expedient action on the Defense Waste Processing Glass Vitrification Facility (DWPF), the authors recommend immediate solidification through calcining. This recommendation is clearly at odds with Governor Riley's efforts to speed the development of the DWPF.

### Recommendations

In addition to recommending that DOE not be allowed to regulate itself or its contractors, the report recommends:

- o prohibiting SRP from producing any more HLW radioactive liquid waste until all the long term questions are resolved
- o the solidification of the existing waste through calcining;
- o the development of remote equipment and methods to protect the health and safety of the workers;
- o stopping the practice of using soil as a disposal medium; and,
- o the immediate cleanup of contaminated aquifers. \*\*

### GAO REPORT ON SRP WASTE MANAGEMENT CONTRASTS WITH EPI STUDY

A GAO report on the Savannah River Plant's radioactive waste management practices, released by Senator Hollings office on

August 9, contrasts somewhat with the recent EPI study (See story above). Though the GAO analyses, conducted at Senator Hollings request, reports that "within the [SRP] plant boundary...some of the surface streams contained elevated levels of radioactivity, and the soil and groundwater at several waste storage and disposal sites were highly contaminated with radioactivity," it does not fault DOE or Dupont's current or planned management practices as does the EPI study.

### Senator Hollings' Response

Senator Hollings released a statement saying that the GAO report confirms the information his office has that parts of the SRP reservation are highly contaminated, and his belief that some form of long-term institutional control will be needed once the facility is decommissioned. The South Carolina Senator recognized that DOE and SRP management are making a good faith effort to clean up the contaminated areas and institute effective monetary practices. Though GAO concluded that contamination of the Tuscaloosa aquifer was remote, he emphasized that, even if the chance was remote any chance of contamination was of great concern.

The GAO report does not address the health and safety aspects of SRP waste management or the disposal of hazardous waste. Only the environmental impacts of the facility's radioactive waste management practices were reviewed. In conducting the analysis GAO reviewed current Dupont waste management practices, examined information on radioactivity releases into the environment, compared the releases to applicable standards, "reviewed assessments and comparisons made by organizations other than SRP," and identified and assessed current and potential environmental problems.

### Offsite Contamination Found Negligible

The GAO analysis of Dupont's records found that "radioactive releases from SRP's operations has very little impact outside the plant boundary. GAO cites Dupont's 1984 report which shows that "tritium and

occasional traces of strontium-90 were the only two radionuclides that could be detected in the Savannah River using routine analytical methods."

By using "very special low-level analysis techniques" GAO acknowledges that Dupont did detect "very low levels of cesium-137." However, concentrates of all three radionuclides were found to be "less than one percent of DOE's offsite concentration guides."

GAO further reveals that though Dupont did detect tritium and very low levels of Cs-137 at two "downriver public drinking water treatment plants, the average concentrations during 1984 were only 8.5 and 12.5 percent, respectively, of EPA's public drinking water standard."

State inventory data from Georgia and South Carolina are said to be in agreement with Dupont's limited measurements made in 1982 by EPA's Eastern Radiation Facility are also cited as in general agreement with the Dupont reports.

#### **On Site Groundwater Contamination**

As concluded by EPI, GAO also determined that "groundwater was highly contaminated with radioactivity at the low-level waste burial ground, some of the seepage basins, and the high level waste tank farms." Large amounts of soils were also determined to be contaminated. However, GAO states that Dupont's evaluations show that "except for tritium, there has been very little movement of the radionuclides because of the retention capability of the soil around the sites.

A Dupont analysis of an onsite accidental

leak from a HLW storage tank is said to demonstrate that most of the resulting radioactivity will not reach groundwater for "thousands of years" and the resulting contaminated groundwater would not discharge into a surface stream for "over a million years." Over this time period the "radioactivity will decay to very low levels."

#### **Contamination of the Tuscaloosa**

The GAO did explore the possibility that radionuclide releases from SRP could reach the Tuscaloosa Aquifer. It is reported that SRP and Dupont officials agree that there is a remote possibility that this could occur. GAO cites DOE and Dupont as saying "if radionuclides did reach the aquifer it would take about 200 years for the radionuclides to discharge into the Savannah River," and at this point the concentration would be very low and would be "further diluted by riverwater before reaching the public drinking water treatment plants located 60 to 70 miles downriver."

#### **Long-Term Institutional Control Necessary**

Because of the highly contaminated areas on-site, GAO concluded that "DOE may have to maintain long-term institutional control over the low-level burial ground, several of the seepage basins, and the high-level waste tank farms." GAO further cites: "for example,...an EIS issued in 1977 showed that these waste sites would remain contaminated with radioactivity for the foreseeable future even after production operations ceased and that their restoration might not be technically or economically practical." \*\*



# Interview

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## ON THE DOE HLW REPOSITORY DECISIONS ... BEN RUSCHE, DIRECTOR, OCRWM

The following interview was conducted with Mr. Rusche by Radioactive Exchange publisher, Edward L. Helminski on Friday, August 8th, and Wednesday, August 13.

**Ben, in testimony before the House Energy Conservation Committee you said that you "recommended" the second round site selection process be delayed, when in earlier testimony the impression was given that you "supported" the decision once it was made. How was the decision made? Did the Secretary make it and ask your staff to consider its implications or were you considering this action on your own?**

Well, the questions, in a sense, are inseparable. The way the Secretary and I interact is somewhere between me being part of a decision and recommending action -- in a way both roles are sort of the same thing. I am not the ultimate decision-maker, so in that sense it's clear that the Secretary, under the Act, retains and is obligated to retain the ultimate decision-making authority over such matters as this. He and I have been extremely close and I doubt if even he could separate the difference between considering a decision together, recommending it and being involved in it. What we do is just talk about the matter and he makes the decision. I'm not trying to evade the question, but I think you're trying to make something that's not really there.

**In the past couple of weeks DOE's General Counsel forwarded papers to Congressman Markey that included an options papers on the implications of delaying the second round that were prepared by your Chicago staff for you. Most of the analyses dealt with the political implications of various possible decisions. Yet you and the Secretary maintain that the decision was not politically motivated.**

These papers were not submitted to me. They were prepared by the Chicago office staff for their own use in discussions with me on the second round program.

**If you didn't direct the staff to prepare these option papers why are there two versions, one with a May 1 date, another with May 13?**

We had more than one meeting. We had a meeting on the first and then a meeting later on.

**But was the staff directed to consider the options for delaying the second round?**

I asked them to consider impacts on the second repository program if the schedule was changed.

**For the second round repositories?**

For the second round repositories.

**The staff papers only analyze terminating the program. Why didn't they consider various degrees of delay?**

If you were considering impact what would you consider as the maximum impact? The maximum impact would be to terminate some portion of the program. That's what they were asked to look at. What would be the impacts and costs, and what were the alternatives on how it could be done. It was pretty straightforward.

**But they didn't look into intermediate periods of delay, only postponing the program indefinitely?**

That's exactly how the matter arose. As I've said in half a dozen places and ways, as part of our ongoing review of scheduling and planning I asked the Chicago office to analyze the impacts of delaying the program as far back as Fall of last year. Twice since I have been here we have changed the schedules.

Secretary Hodel and I recognized after I got here that the program was just out of phase with the Nuclear Waste Policy Act. The Act established a set of dates that said the first repository decision ought to be made, and then a couple of years later the second repository decision ought to be made. And, we were on a schedule that looked like it had some potential for having the second repository consideration proceeding on a pace faster than the first one. The decisions were not the same decisions but they certainly were not in line with the Act. So we changed the schedule. We changed it again, and the Project Decision Schedule (PDS) that was published last spring showed about 1993, not 1989, as the date when the second round site characterization recommendations would be made. Not a word was said when that change was made.

Even last fall we looked at whether the timing of the scheduling of the first repository program relative to the second was right. The end of the year came and the EIA data appeared and the design of the program had taken on some additional dimensions. We looked again. The question was whether to proceed with the Area Recommendations Report (ARR) in January. We decided that we didn't have adequate confidence in the timing of the first repository effort because we lacked at least two things. One was we didn't have the EAs finished at that time. The other was we didn't yet have a thorough consideration in hand on how we were going to make the decision on the first three sites. We also did not have the President's decision, nor were we sure we would get it after the recommendation was made. Remember, under the Act the President has the opportunity to defer the decision and send it back for six more months of work.

So, given the status of the first round selection process, we decided to go ahead with the ARR draft. And we did. And we received a lot of comments and got involved in a lot of meetings. And what people seemed to want to do was say that's the only thing that happened. They are saying that we looked at all that was happening, the comments being sent in, and went back to smoke filled rooms and said "Ah, ha. This

is more than we can take." But it's just not so.

I'm not trying to downplay the fact that those reactions were real. There were some awfully tense reactions. I had countless meetings with members of Congress from second repository states and the Secretary visited two or three delegations as we worked through that period of hearings and briefings.

But what really happened in addition to that -- what brought us to consider delaying the second round -- was that we finished the first round EAs and had concluded that the basis for nomination was well founded. We looked at the 23,000 sets of comments that we received on the first round EAs and we didn't find anything that said they had fatal flaws. On the contrary, we found many things that, considering the questions, gave us added confidence. We'd gotten into the methodology development business and worked out a way to have the Academy review it. And on April 10th I got a letter from the Academy that said "the methodology looks good. We don't know for sure what all the answers are, but it looks like you are doing a good job." This response gave us considerable confidence that from a technical standpoint we had a methodology that was a valid basis for developing meaningful information for me and for the Secretary. And we did.

Now, come May 1st, we had the EAs pretty much in hand. We had the methodology pretty much in hand and walked through it. In fact, the methodology document was finished on May 5th. We had begun discussions with the White House -- I say "we" -- the Secretary had begun discussions with the White House and informed them that we were looking toward a mid-May timing for the recommendation. If you recall, the President went to the Summit at about that time and because of that it appeared that the timing was going to get shifted a week or two. Now, with all this completed on the first round decision, I told the Secretary it was time to look at the schedule for the second repository. And I outlined the four options that are in our response to Congressman Markey. They are