

WM Record File  
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WM Project 10  
Docket No. \_\_\_\_\_  
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WM DOCKET CONTROL  
Washington State High-Level Nuclear Waste  
Advisory Council Meeting  
January 20, 1984 - 9:30 a.m.  
EFSEC Hearings Room P2-426  
184 FEB 27 12:42

Distribution:  
RFB/MTB DM/CR  
JRB/HJM JTC/RS  
WKEER  
(Return to WM, 623-SS) IS

Attendees:

Susan E. Gould, Chair  
Warren Bishop  
Councilman Lane A. Bray  
Dr. Jerome Finnigan  
Ron Greenen  
Mayor Joe Jackson  
Mayor Fred Jarrett

Anita Monoian  
Commissioner W. H. Sebero  
Jim Worthington  
Brian Baird (representing  
Dr. Estella Leopold)

Sue Gould opened the meeting. She introduced Brian Baird of the University of Washington, who is representing Dr. Estella Leopold while Dr. Leopold is on a six-month sabbatical.

Warren Bishop reported on the activities of the Council Subcommittee, which he chairs. The Committee was responsible for the Public Opinion Survey, conducted by Communication Design, Inc. under the direction of Stuart Elway. Mr. Bishop stated that he wanted to emphasize that the survey was not a "public opinion poll", but a means to develop and shape the forthcoming public information program of the Office of High-Level Nuclear Waste Management. The purpose was to evaluate the perceptions of people concerning nuclear waste management issues in the state, and he believed the survey accomplished that purpose. He did point out the Committee had learned one important lesson, and that was the need to spend a great deal of time with a varied group to properly develop a survey. He stated the public members of the Committee were very helpful. He went on to say he thought the results would prove helpful to any consultant who might be hired to develop a public information program for the office.

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Don Provost discussed the Request for Qualification/Request  
for Proposal (RFQ/RFP) program after David Stevens presented

the background for hiring consultants to augment the staff.

Stevens explained consultants had been hired, not only for the survey, but also to analyze the USDOE Site Characterization Report and to provide technical support not available in state government. The purpose of the present search is to find an umbrella contractor who could provide the necessary technical support and develop a proposed public information and participation program.

Provost advised that the request for the RFQ's was advertised, with a deadline for acceptance of January 25. He said an evaluation team from the Department of Ecology would choose three to six consultants to submit detailed proposals. He also said interest shown has been good so far. He emphasized the importance of the public information activity.

Discussion followed and questions were raised about the time frame to choose the contenders. Provost stated the aim was a two-week time frame, depending on the legislative schedule, and to review sessions were planned by the Review Team. The question was asked as to what role the Council would play; would there be a member of the Council on the Review Team; would it meet the needs of the Council. Could one contractor cover three diverse subjects: public information, technical support, and management and policy review? Provost responded by saying we would have a lot of flexibility in this area. A smaller firm without expertise in all three areas, could sub-contract, and we would be in consultation

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with the selected prime contractor.

Dr. Finnigan wondered if the same Review Team would review the RFP's when they were submitted, and was assured we would be consistent in using the same team. Further discussion centered on the advantages and disadvantages of having one umbrella contract versus three separate contracts. The decision to use this approach was based on grant restrictions and the time factor. The question was also raised as to what alternative does the Council have if the work is dissatisfactory in any of the three areas. Provost replied there is language written in that the work can be dropped at any time without liability.

Discussion continued concerning the time frame, the advantages of having a contractor on line to begin a public information program as soon as possible, and the question of presenting the selection to the Council. It was decided to name a member of the Subcommittee to serve on the Review Team, and the Chair suggested Warren Bishop to serve. Bishop will work with the Subcommittee, and should there be any concern on the part of the Subcommittee the matter would be brought to the full Council. The consensus was that the Council would like to take a look at the findings, and the Chair responded by saying that if time constraints prevented a special meeting of the Council, at least the findings would be sent to each member. However, she said if it were necessary to call an emergency meeting, that would be done.

David Stevens reported on the USDOE Information Meeting held in Washington, D.C. on December 12-15, 1983. He said this was the fifth year such an information meeting was sponsored

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by the Department of Energy. It is billed as a public meeting for informational purposes on High-Level nuclear waste, but it proves to be a highly technical forum which attracts contractors and consultants and those interested in becoming such, but does dispense much information. Last year the meeting attracted about 800 people, and this year there were over 1200 in attendance. There were several representatives from the state of Washington, and one of the highlights was the keynote address which was delivered by Susan E. Gould, as Chair of the Citizens Advisory Council and the Policy and Review Board, on behalf of Governor Spellman. The speech was well received. The Deputy Director, Mike Lawrence, of the Department of Waste Management, USDOE, remarked the speech gave the USDOE a "mixed report card". Although the speech did give credit to the Department for their recent efforts in working with the states, it also pointed out concerns of the states. One was trying to determine if USDOE were on a firm schedule. Their response to this question was that they were trying to "still fashion a schedule that would be consistent with the schedule that is contained in the Waste Policy Act." However, they had slipped on the Guidelines, and if everything went well, and they did not have any interruptions, delays, etc. they felt they could still have a repository operational by the statutory date of 1998.

The meeting did generate a great deal of information on current activity, including all the elements of the program.

The next Informational Meeting will be held the latter part of November, 1984, in Chicago.

Discussion followed on the time frame, and Brian Baird inquired what Mr. Stevens meant by "qualifiers". Stevens explained there were several elements that would preclude USDOE meeting the 1998 date, including the adoption of final Guidelines, which have now slipped to April at least of this year after concurrence by NRC; time to characterize sites once recommended carrying out activities, licensing, and actual construction time.

Mr. Stevens went on to mention that the statute requires the Nuclear Regulatory Commission concur with the USDOE Guidelines. The NRC held a public meeting on January 11 to get views of the states and other groups, including the environmental groups and the USDOE on the Draft Guidelines.

The Department of Energy defended the Guidelines with some vigor. Seven states, including Washington, appeared before the Commission to discuss a number of significant issues. Those that stood out were dealt with the Guidelines, which most states felt were too subjective and needed more quantification in order to do a more adequate job of determining the suitability of the sites. Another concern was that because of the non-quantifiable character of the Guidelines, they could be looked at as not being consistent with the Waste Policy Act. Another major question raised was whether the Department was going to use the engineering barriers in an attempt to shore up the potential inadequacy of a geotopic site. The Department tried to assure NRC that they were concerned about the latter issue and the geology had to be sufficient and engineering barriers would simply be reinforcement.

Washington State testified that the NRC should take a very careful look at the proposed guidelines in the broadest possible sense, not only to determine compliance with the regulations, but consistency with the Federal Act. This was especially important in view of the possibility of EPA recommending changes in distance to the accessible environment, and a difference in calculations over 10,000 years.

NRC announced at the meeting that they would attempt to get a draft decision document on the concurrence by the end of February, ask for comment by participating states, and get a final decision about the latter part of April.

David Stevens reviewed the legislation affecting the High-Level nuclear waste program currently being considered in the Legislature:

Senate Energy & Utilities Committee

SB 4534	Williams	Provides for Governor to set a salary for Chair of the Policy & Review Board and Advisory Council, and would make position subject to advice and consent of the Senate.
SB 4548	Williams	Would make proposed Consultation and Cooperation Agreement a part of state law.
SB 4558	Williams	Would establish procedure for Legislature to convene to consider any Presidential decision recommending a site in Washington State for a High-Level waste repository.
SCR 142	Hurley	Any agreement negotiated between the State and USDOE regarding siting a repository in Washington State would be subject to review by the Legislature prior to its final signing.
SJM 127 (HJM 39)	Williams	Requests USDOE to advance studies on suitability of other geologic media (such as granite). Would request that granite site be characterized with others for the first repository.

SJM 131 Williams Would request elimination of liability limits for nuclear-related accidents as set under the Price-Anderson Act.

House Energy & Utilities Committee

HB 1637 Nelson Would designate present Nuclear Waste Policy & Review Board as the "Nuclear Waste Board." Identifies it as initial state agency to contact the USDOE on any matter relating to long-term disposal of High-Level nuclear waste. The Board would conduct C&C Agreement negotiation technical review; review applications for federal funds; carry out educational programs coordinated through the Advisory Council and monitor federal activity. If the State of Washington is selected as a site for a nuclear waste repository, the Board would review the decision and recommend to the Governor and Legislature approval or disapproval of the site selection. The Department of Ecology would provide staff to the Board upon request.

HJM 39 Nelson Same as SJM 127 (see above)

HCR 37 Nelson Same as SCR 142 (see above)

Considerable discussion followed on the details of HB 1637, and the Chair asked for views of the Council, which she would be reporting to the Board at the afternoon meeting. Mayor Jarrett expressed his strong opposition to the bill, and said he would prefer to keep the process straightforward. Jim Worthington also expressed his disapproval, stating he liked a nice, simple structure. He pointed out if this bill were passed it would be the third change in the program since its inception as an Executive Order, Legislative act, then this new structure. He felt the credibility would be lost, as well as the continuity. Lane Bray also expressed his disagreement with the bill.

The Chair expressed some concern with the C&C process, should the bill be adopted and asked for views of the Council. David Stevens stated the legislative committee had scheduled two additional meetings on the C&C process, one the 31st of January, in which they would focus on any questions they have, and they stated on

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February 15th they would like to have the Department of Energy's response to the questions they raised on the 31st.

It was suggested a weekly update on the status of the bills discussed be sent to the Council and the Board, and Mr. Stevens said that would be done. Mayor Jarrett inquired if it would be worthwhile for members to talk to their individual Representatives, and the Chair responded by saying the Legislators need to have the information brought to them.

As the discussion continues, it was suggested that it might be a good idea to extend an invitation to the Energy Committee members, and perhaps any other interested Legislators, to tour Hanford and see what is happening to the defense wastes. It was also mentioned that perhaps some Board and Council members who were unable to make the tour before would be interested to go. The Chair suggested plans could be made for such a tour when the Legislature is adjourned.

Discussion then centered on the C&C Draft Agreement itself, and Mr. Stevens pointed out the C&C Agreement is not an agreement to locate a repository in the State of Washington. Its only purpose is to carry out the opportunity provided in the National Nuclear Waste Act where the states exercise an independent monitoring and review ability. It was suggested the members of the Council review the draft, and make any suggestions they felt would be important, such as language change, missing issues, etc. A workshop could be scheduled for the full Council, but at this point written suggestions would be appreciated.

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Mr. Bishop asked when the closure date would be on the agreement, and Mr. Stevens replied that when Congress enacted the federal Act, it was anticipated any state agreement would be concluded in six months, but the Act does not mandate six months.

The Department of Energy is now preparing a report to Congress since this C&C Agreement was not concluded in six months. The real reason to have such an agreement is so that we will have a way to monitor the way in which USDOE conducts site investigations. For some states, that is not even started. For our state it has been ongoing for some seven years.

The Chair asked the council if they wanted a full or half-day workshop on the C&C Agreement, or would they prefer to comment on an individual basis. Questions were raised about the intent of the Joint Subcommittee, would they be likely to devote more time, and perhaps bring about modifications to the Agreement. The Chair replied that nine major issues had been raised at the Subcommittee meeting, and she felt they would want to make changes, and perhaps even might mandate them. Since the next hearing of the Subcommittee would be on the 31st, it was concluded the members of the Council would submit any suggestions to the Chair before that date, after further study of the Draft Agreement. At that time it could be determined if it were necessary to call the Council together to discuss any changes. The Legislative Update will keep the Council advised of the actions of the Legislature on this issue.

David Stevens announced the addition of a Librarian to the staff to set up the Public Reference Center, and introduced Jeanne Rensel as the new Librarian. Jeanne asked for any input from the

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Council members as to what they would like to see in the Reference Center, and welcomed their suggestions. The center is located in the office of High-Level Nuclear Management at 5826 Pacific Avenue, Lacey. The telephone number for the Office is (206) 459-6670. The mailing address is Department of Ecology, PV-11, Olympia, Washington 98504.

Dr. William A. Brewer was also introduced as the Engineering Geologist recently added to the staff. He comes with a great deal of experience in the field, and most recently from the University of Washington.

The Chair asked Warren Bishop if he had any further information on the Public Information Program, and he responded by saying the suggestion of expanding the Subcommittee had value, since there are now only three members. The Chair agreed and stated she would appoint a couple of new members within a week or so. Mr. Bishop went on to say Marta Wilder had been doing some preliminary work on the types of things that should be done in the immediate future which should be discussed in the Subcommittee as soon as possible.

Don Provost reported on the Rockwell Workshop which he attended with Dr. Brewer on January 9; 10 and 11. About fifty people were in attendance at this very technical workshop, on a new conceptual design for groundwater flow based on geochemistry. Earlier models had been criticized by USGS, and NRC and geochemistry was one of the criticisms. It did not account for mixture of waters among the layers. He showed slides, showing the vertical groundwater flow that had not been acknowledged earlier. The charts he presented giving a synopsis of his report are attached.

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The question was asked as to the meaning of RRL, which he explained meant Reference Repository Location. Provost went on to say the statements made in this report were pretty general, but the significance lay in the fact they were different from the ones made previously. The admission is made that there are a lot of uncertainties as to what is causing the mixing, why is it happening. They do not know. They will have to put in new wells and make new tests. Provost felt progress was being made in this area, and the new data would be compared with the old. The testing will refine the groundwater model it will take some time to complete.

Susan Gould announced the appointment by Secretary of Energy Donald Hodel of David Stevens to the new USDOE Advisory Panel on Alternative Means of Financing and Managing Radioactive Waste Facilities, provided for under the National Nuclear Waste Management Act. The purpose of the panel is to study and report to the U.S. Department of Energy on alternative approaches to managing and construction and operating civilian radioactive waste facilities.

The question was asked from the audience what is the definition of the public information program discussed in this meeting, and what is the scope. What information will be disseminated?

The Chair responded by stating the Council is charged with giving the citizens of the state the opportunity to participate in any decision that is finally made by the state on the repository program. In order to do that a program will be designed to provide information the people need and want in order to make that decision. The program will be objective in nature to give the public the information they need, without any attempt at propagandizing.

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Another question was posed from the public: Does the January, 1985 date for site nomination mean that the hydrology data won't be available, or does it mean the data are not important? Provost explained that site characterization will build on existing data and proceed with new testing before any final decision is made on licensing and construction.

The meeting was adjourned.



WASHINGTON STATE DEPARTMENT OF ECOLOGY  
HIGH-LEVEL NUCLEAR WASTE MANAGEMENT LEGISLATIVE PROPOSALS

Status as of: February 24, 1984

<u>Status</u>		<u>Senate Energy &amp; Utilities Committee</u>	
H Passed 3rd	ESB 4534	Williams	Provides for Governor to set a salary for Chair of the Policy & Review Board and Advisory Council, and would make position subject to advice and consent of the Senate.
S Energy	SB 4548	Williams	Would make proposed Consultation and Cooperation Agreement a part of state law.
H Rules 2	SB 4558	Williams	Would establish procedure for Legislature to convene to consider any Presidential decision recommending a site in Washington State for a high-level waste repository.
S 2nd Reading	SCR 142*	Hurley	Any agreement negotiated between the State and USDOE regarding siting a repository in Washington State would be subject to review by the Legislature prior to its final signing.
H Passed 3rd	SJM 127 (HJM 39)	Williams	Requests USDOE to advance studies on suitability of other geologic media (such as granite). Would request that grantie site be characterized with others for the first repository.
H Passed 3rd	ESJM 131	Williams	Would request elimination of liability limits for nuclear-related accidents as set under the Price-Anderson Act.
		<u>House Energy &amp; Utilities Committee</u>	
S 2nd Reading	ESHB 1637*	Nelson	Would designate present Nuclear Waste Policy & Review Board as the "Nuclear Waste Board." Identifies it as initial state agency to contact the USDOE on any matter relating to long-term disposal of high-level nuclear waste. The Board would conduct C & C Agreement negotiation; technical review; review applications for federal funds; carry out educational programs coordinated through the Advisory Council and monitor federal activity. If the State of Washington is selected as a site for a nuclear waste repository, the Board would review the decision and recommend to the Governor and Legislature approval or disapproval of the site selection. The Department of Ecology would provide staff to the Board upon request.
H Rules 2	HJM 39	Nelson	Same as SJM 127 (see above)
H Energy	HCR 37	Nelson	Same as SCR 142 (see above)

FOR DAILY STATUS REPORTS CALL THE LEGISLATIVE HOTLINE:

1-800-562-6000

Office of High-Level Nuclear Waste Management  
Department of Ecology PV-11  
Olympia, WA 98504  
(206) 459-6670

\*Status may change with today's (2/24) actions.

High-Level Nuclear Waste Policy & Review Board Meeting

January 20, 1984

1:30 p.m.

Hearings Room

Building #1 - Rowsix

4224 Sixth Avenue, S.E., Lacey, WA

The meeting was opened by Susan E. Gould, Chair.

Because the Legislature was in session, Senator Williams was represented by Jason Kynkagen of the Senate Energy Committee staff, Mary Guay represented Senator Benitz, and Ted Hunter represented Representative Dick Nelson.

Mr. John Burnham of Battelle Pacific Northwest Laboratories was introduced. He presented a report on a PNL study concerning the U.S. Department of Energy site repository program at the Hanford Reservation. The objective of the review was to look at the existing state of knowledge in basalt - to measure this against the USDOE Program Guidelines now being considered by the Nuclear Regulatory Commission.

The report concluded that no data has been collected that disqualifies the site for consideration as a potential repository, but that substantial additional study is necessary in repository design, hydrology groundwater modeling, and other areas. A copy of the Summary of the report was distributed to all members of the Board.

Mr. Burnham was asked how long this report took to complete. He replied it took from July through November 1983, using about

25 scientists half time. He also replied to the question of how long it would take to characterize the site, by saying that question was not really addressed. However, in some areas of inquiry the time spent would be relatively short, for example, in terms of geochemistry. In the case of waste packaging, it is by definition a six or eight year problem. Geohydrology--long-term pumping tests have to be carried out. A lot of the drill and test techniques used for several years, are dependent upon what is happening to the water head over time. Also they are just starting some large-cluster pumping tests which may take two or three years. In each area there is a different set of problems and a different time horizon.

Discussion centered on hydrology, comparing the Rockwell reports, and Mr. Burnham replied PNL is constantly monitoring the whole site, doing a lot of modeling on their own, and are not trying to duplicate Rockwell's activities. In response to questions about the Environmental Protection Agency's requirements, he replied that EPA on the whole has a fairly enlightened picture of how a repository ought to perform. In response to an inquiry as to the relative life of a cannister before it disintegrates in a salt environment versus basalt, he replied it would depend upon the conditions and the saturation and mineral content. He went on to say you will never find a repository that has perfect conditions; they will all have problems. The waste package and overpack would have to be designed for each medium.

Further discussion followed on the pros and cons of large bore holes compared with smaller bore holes and underground multi-directional drillhole probing and specialized in situ geophysical testing, in advance of, and subsequent to, actual repository mining operations. The question was posed as to the cost of such operations. Mr. Burnham explained that it would be relatively less than running one of the large drills into one of the flow tops, which are under high pressure. As he said, hitting one of these could "lose the farm". It is also possible to hit a fault with one of these larger holes, which is then a path for migration of the water. Small-diameter holes, which are used in the mining industry, can be packed off. Other techniques can also be used to locate faults, such as radar, sonar, etc., but they won't work through 3,000-4,000 feet of high density layered structure.

In referring to the "hydrologic barriers", Mr. Burnham replied that this is one of the anomalies that has not yet been fully explained, and until they have both a hydrologic model and a tectonic model that explain the phenomena observed, then no one gives much credence to the model's prediction of other things. This is one of the anomalies, such as why do you have the Yakima Fold (Gable Mountain & Ahtanum Ridge) running East-West, when most everything else runs North-South.

The question was asked if PNL had looked at the depth question, and Mr. Burnham replied they had reviewed the 3-volume report (BWIP 028), which appeared to be leaning toward a higher horizon. He believed their current leaning toward the Cohasset seems to be well considered. He further said that since BWIP did not look

at an even higher horizon, they did not explore the possibility. He was also asked how much time would he consider it taking if they were to undertake such a study, without considering the cost. Mr. Burnham replied he simply did not know.

Another question referred to the "swarm earthquaking", which has been reported and Mr. Burnham explained it is almost constant.

The seismic activity is occurring at a very low intensity at Hanford which has been monitored for years and years. He said his rock mechanics people considered this more of a problem than any potential big event. This would be of much more interest to the repository program and until there is an exploratory shaft to monitor the activity, it is all speculation.

Mr. Watson referred back to the Geohydrology issue and said it appeared to him Golder and USGS had concluded it was impossible at the present time to pin down the travel times within the band that exceeded or was much less than 1,000 years. Pacific Northwest Laboratories seemed to be more certain it would be the 1,000 years. He wondered if there were a conflict between PNL's views and Golder and the USGS. Mr. Burnham replied the Geologic Survey and PNL argued with the statement: "There is a 95% probability that travel time will be greater than 5,000 years." From PNL's work, from Rockwell's work, and from USGS' work, he said if PNL had to bet, that the final answer would be more than 1,000 years. But, he said they are not saying this is 99% certain, and that conclusion would not be good enough for NRC. "We are just going to have to come up with a validated model and real statistics."

Mr. Stevens reviewed the U.S. Department of Energy Draft Mission Plan, which was circulated to all the states for their comments. He explained that the Mission Plan is essentially a strategy document required by the National Waste Policy Act, setting forth what the Department is trying to accomplish and when. Volume I of the nine volumes which are being prepared, was distributed to each member of the Board. Concerning the schedule, Mr. Stevens pointed out it was going to be most difficult to meet the time lines originally set, and only if certain things happened: (1) there were no further delays in the Guidelines, (2) no further delays in site characterization, and (3) they could pick up time on construction. He said USDOE was still confident they could nominate five sites for site characterization and recommend three sites to the President by January of 1985.

The letter of transmittal of the draft Mission Plan indicated comments from the states should be received by January 31, 1984, and Mr. Stevens indicated a letter of comment would be sent to the U.S. Department of Energy, and welcomed any comments the Review Board might have after reviewing the draft Mission Plan. Mr. Lewis wondered if they should be sent to the Office by Friday, January 24, and Mr. Stevens agreed that would be most helpful.

Don Provost reported on the Rockwell Workshop which he attended with Dr. Brewer on January 9, 10 and 11. About fifty people were in attendance at this very technical workshop, on a new conceptual design for groundwater flow based on geochemistry. Earlier model had been criticized by USGS, and NRC and geochemistry was one of the criticisms. It did not account for mixture of waters, among the layers. He showed slides, showing the vertical groundwater

flow that had not been acknowledged earlier. The charts he presented giving a synopsis of his report are attached.

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There were several representatives from the state of Washington, and one of the highlights was the keynote address which was delivered by Susan E. Gould, as Chair of the Citizens Advisory Council and the Policy and Review Board, on behalf of Governor Spellman. The speech was well received and the comments were unusually favorable. The Deputy Director, Mike Lawrence, of the Department's Civilian Waste Management Office, USDOE, remarked the speech gave the USDOE a "mixed report card". Although the speech did give credit to the Department for their recent efforts in working with the states, it also pointed out concerns of the states. One was trying to determine if USDOE were on a firm schedule. Their response to this question was that they were trying to "still fashion a schedule that would be consistent with the schedule that is contained in the Waste Policy Act." However, they had slipped on the Guidelines, and if everything went well, and they did not have any interruptions,

delays, etc. they felt they could still have a repository operational by the statutory date of 1998. We felt there are some qualifiers to that, which seem to be looming larger and larger, and it would take a remarkable effort for USDOE to get to that stage.

The meeting did generate a great deal of information on current activity, including all the elements of the program. The next Informational Meeting will be held the latter part of November 1984 in Chicago.

Ted Hunter, who also attended the meeting, agreed with Mr. Stevens that there was a lot of information provided at the meeting and it was his understanding the proceedings were to be released shortly. He thought they would be of interest to the Board. Mr. Stevens concurred and stated he would try to get that information to the Board.

Mr. Stevens went on to mention that the statute requires the Nuclear Regulatory Commission concur with USDOE the Guidelines.

The NRC held a public meeting on January 11 to get views of the states and other groups, including the environmental groups and the USDOE on the Draft Guidelines.

The Department of Energy defended the Guidelines with some vigor. Mr. Stevens attended as a representative of Washington along with officials from six other states. Those that stood out dealt with non-specific nature of the Guidelines, which most states felt were too subjective and needed more quantification in order to do a more adequate job of determining the suitability of the sites. Another concern was that because of the non-quantifiable character of the Guidelines, they could be looked at as not being consistent with the Waste Policy Act. Another major question

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HJM 39 Nelson Same as SJM 127 (see above)

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Mr. Stevens reviewed the provisions of substitute House Bill  
1637. He said it would change the organization adopted in 1983  
under Senate Bill 3273. It would provide additional authority  
to the Review Board as primary contact with the U. S. Department  
of Energy. The Board itself would remain as it is, if the bill  
were not amended to give the eight Legislative Members full voting  
powers. Ted Hunter indicated this was not contemplated.

Other major components would be to have the Review Board  
deal with the USDOE on agreements, such as the C & C agreement  
and any others. It would also set forth a review process whereby  
the Legislature would be involved in those decisions, which would  
become a shared activity with the Executive branch. It would  
also provide legislative review if the President should designate  
Washington State as a repository site.

Mr. Stevens asked Ted Hunter if he wished to clarify any of those remarks. Mr. Hunter stated the bill did not intend to supplant the Department of Ecology, but was designed to set up a process to bring into the hands of the legislative and executive branches concerns with the agreement process. It would identify the Board as the central entity for making those recommendations to the Legislature and the Executive branch, and would negotiate technical contracts. It would also give the Legislature the ability to say Yea or Nay on the site, if selected, after the Board made the initial determination to the Legislature and Governor. He went on to say it does not change the structure of the Board, but changes the role of the Board that involves both the Legislative and Executive Branches.

Discussion followed, and Sue Gould asked the question that was posed in the Advisory Council - To Whom is the Board responsible? Hunter replied the Board is independent and could develop its own policies but has the power to recommend decisions to the Legislature and to the Governor. He said the purpose of the bill was to establish a legislative review process.

Following further discussion, Mr. Stevens advised the Office would be providing a weekly summary of the bills discussed, with current status. He proceeded to review the other bills currently before the Legislature.

Mr. Stevens reported on the Joint Radioactive Waste Subcommittee hearing held the night before on the draft C & C Agreement, which is being negotiated between the state and the U. S. Department of Energy. The purpose of the agreement is to carry out the legislative opportunity provided in the National Nuclear Waste

Act where the states exercise an independent monitoring review ability. All Board members had been provided a copy of the Draft Agreement previously. Comments from the Board on the Draft Agreement were solicited, and Mr. Stevens said should a formal meeting be desired to go through any or all of the issues, it could be arranged.

Mr. Lewis stated he was under the impression the Board had a statutory responsibility to participate and advise on this Draft Agreement, and felt the Board should spend some time looking at the document. The Chair responded it was her feeling nothing should be done to interfere with the legislative review, but on the other hand it would be possible to set a time frame for open discussion on the Draft Agreement, without taking any sort of formal action.

Discussion continued on the role of the Board, with Mr. Lewis stating he would like to see a day-long session at some point to walk through the Agreement, so the Board could make its recommendation. He wondered how the move would be made from a negotiation point to a review, both legislative and executive, without violating the negotiating side. Should the Negotiating Team be asked to come back with some recommendations to the Board? Ms. Kirner said she felt the need to understand the draft agreement better, and wondered if there were a way to get USDOE, the Negotiating Team, and the Legislature together for a joint review.

The Chair asked Ted Hunter for his thoughts on the issue, and he responded by giving the time frame for the legislative review of the agreement. The Subcommittee did go over the agreement

last night line by line, and will meet again on January 31 to propose specific changes, should there be any, which would then be forwarded to U. S. Department of Energy for their review and response. On February 15th there would be the third meeting of the Joint Subcommittee to hear USDOE's response. That would complete the process of legislative review, unless something didn't go right that would leave time during the legislative session to deal with that.

Mr. Watson expressed concern about the Board members not on the Negotiating Team lacking the understanding the Team and the Legislature have developed and he would be in favor of the Board being briefed before February 15. The decision was made to schedule a meeting for the Board to review the draft C & C Agreement at 7:00 p.m. on Thursday, January 26, with the place to be arranged and notice given to the Members. It was also suggested a member of the Governor's staff be invited to attend.

Mr. Lewis then expressed his concern about the intent of the legislative Joint Subcommittee to submit their review of the agreement to the USDOE, and ask for their response. He wondered if the Subcommittee might rather relay their concerns to the Negotiating Team, and have the Team reporting to the USDOE. Ted Hunter replied the contemplation was that the concerns, reactions, and comment by the Subcommittee would be made through the Negotiation Team. Mr. Lewis asked if the Legislative Subcommittee was going to supersede the Negotiating Team by going directly to USDOE, or are they going to go through the Negotiating Team? Hunter replied he had been directed to contact USDOE and set up a meeting between the Negotiating Teams at which time any information,

concerns, etc. could be conveyed to USDOE.

It was planned to have a State Negotiating Team meeting before February 15, a State Team meeting with the Subcommittee, if necessary, and then a meeting with the State Team and USDOE team. The Chair asked Jason Kynkagen to have Senator Williams relay any thoughts he might have on this process to her, specifically about working through the State Negotiating Team.

Mr. Stevens introduced the two new members of the staff of the Office: Jeanne Rensel, Librarian in charge of setting up the public Reference Center, and Dr. William A. Brewer, Engineering Geologist.

Mr. Stevens briefly reported on the Request for Qualifications, which was sent out to procure a consultant to assist with the technical analysis, management and policy review, and a public information program. Responses are to be in by the 25th of January, and a Review Team will select qualified firms to submit a formal proposal. The Chair indicated a member of the Advisory Council and a member of the Policy & Review Board would be asked to sit on the Review Team. Richard Watson was appointed as the Board member assigned to this task.

The question was asked about the status of the grant, and Mr. Stevens stated we have a grant amendment for this fiscal year. It was necessary to negotiate the grant down due to the slippage of Federal schedules. This grant amount is worth approximately \$770,000 for fiscal year 1984.

An invitation has been received by the Office to attend a Waste Management Conference in Arizona in March, and Mr. Lewis

asked if there were going to be any representation from this state at the conference. It was noted that Nancy Kirner was on the program. Since it is to be a very comprehensive program - approximately 75% high-level and 25% low-level - the suggestion was made to circulate the information among the Board Members on the Conference to see if there would be interest shown by others. Realizing everyone cannot be expected to attend each conference because of budget restrictions, Mr. Stevens suggested some allocation might be made as these meetings come up. Nancy Kirner was designated as an official representative of the Policy and Review Board.

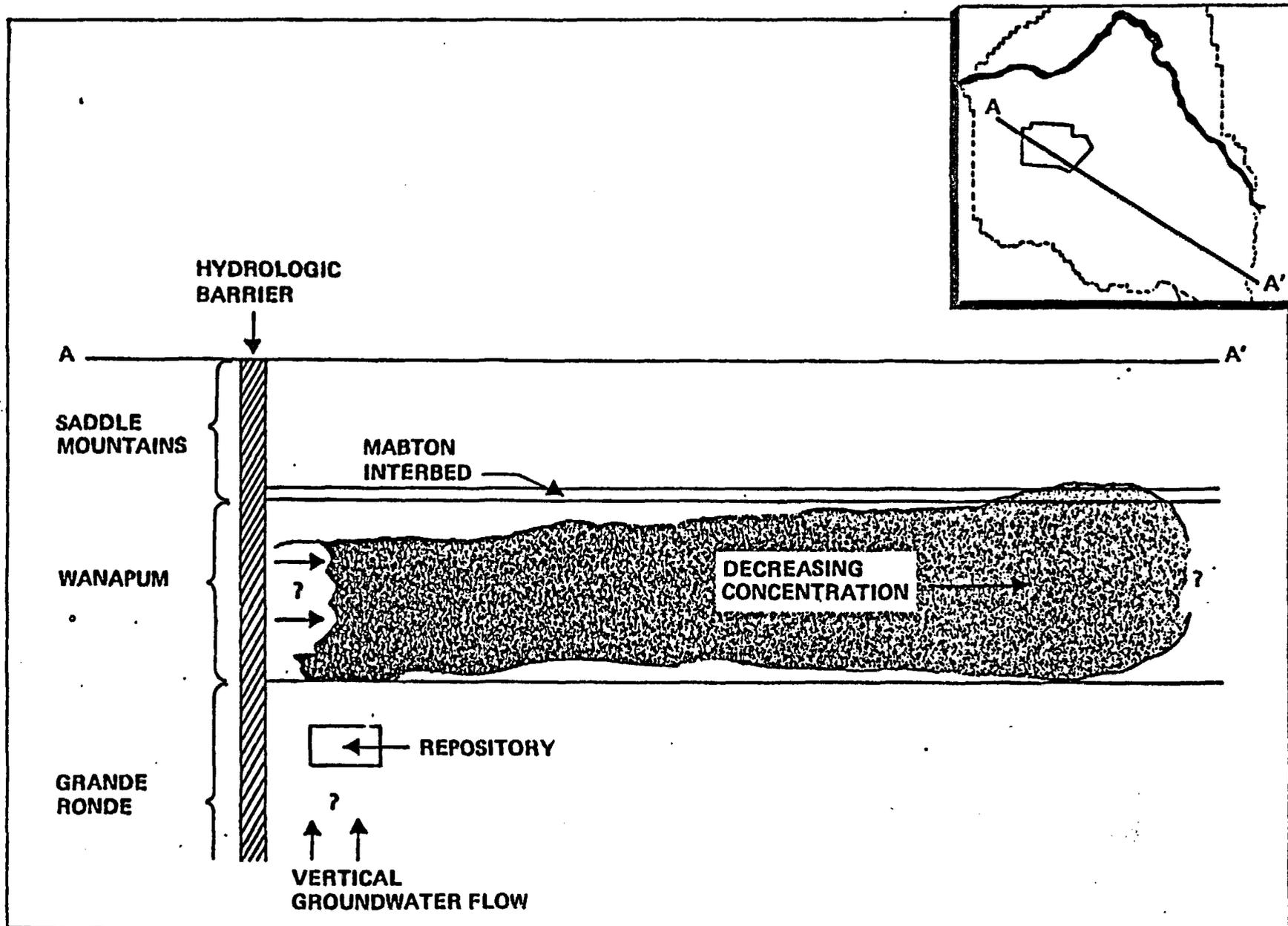
Sue Gould gave a brief report on the Public Information Program, which was extensively discussed in the Advisory Council Meeting. She reported that the Subcommittee had met several times to discuss the results of the survey. She emphasized that the survey was not a public opinion poll, contrary to what was printed in the media. It was done to give the Council an awareness of the knowledge and concerns of the public, in order to assist in directing the program that will be instituted. The Council believes it is imperative to initiate this program as soon as possible considering the dates and the deadlines of USDOE. The whole purpose of a public information program is to provide the public an opportunity for greater awareness of the repository program in order for the citizens to make well informed decisions.

A final question was raised about the technical review program for the Board members, which had been planned earlier. The original meeting was not feasible because of the Legislative session,

but plans are to have the meeting after the session.

The meeting was adjourned with the announcement that the next meeting would be held on Friday, February 17, at 1:30 p.m. in the EFSEC Hearings Room.

# SCHEMATIC CROSS SECTION AA' SHOWING LOCATION OF HYPOTHESIZED MIXING PLUME



## **SUMMARY - CONCEPTUAL FLOW MODEL INTERPRETATIONS**

- ◆ **MIXING OF GROUNDWATERS IS OBSERVED IN RRL BOREHOLES**
- ◆ **APPARENT UPWARD MOVEMENT OF DEEP GROUNDWATERS IS OCCURRING**
- ◆ **NO INFORMATION REGARDING THE RATE OF MIXING IS AVAILABLE**
- ◆ **THE HYDROLOGIC BARRIER MAY BE RELATED TO THE MIXING PROCESS IN THE RRL**
- ◆ **OTHER STRUCTURES SUCH AS THE GABLE MOUNTAIN - GABLE BUTTE AND RATTLESNAKE HILLS ANTICLINES MAY ALSO PERMIT VERTICAL GROUNDWATER FLOW**
- ◆ **GROUNDWATER FLOW WITHIN THE WANAPUM BASALTS APPEARS TO BE TO THE SOUTHEAST**

# **SIGNIFICANT UNCERTAINTIES OF HYPOTHESIZED CONCEPTUAL FLOW MODEL**

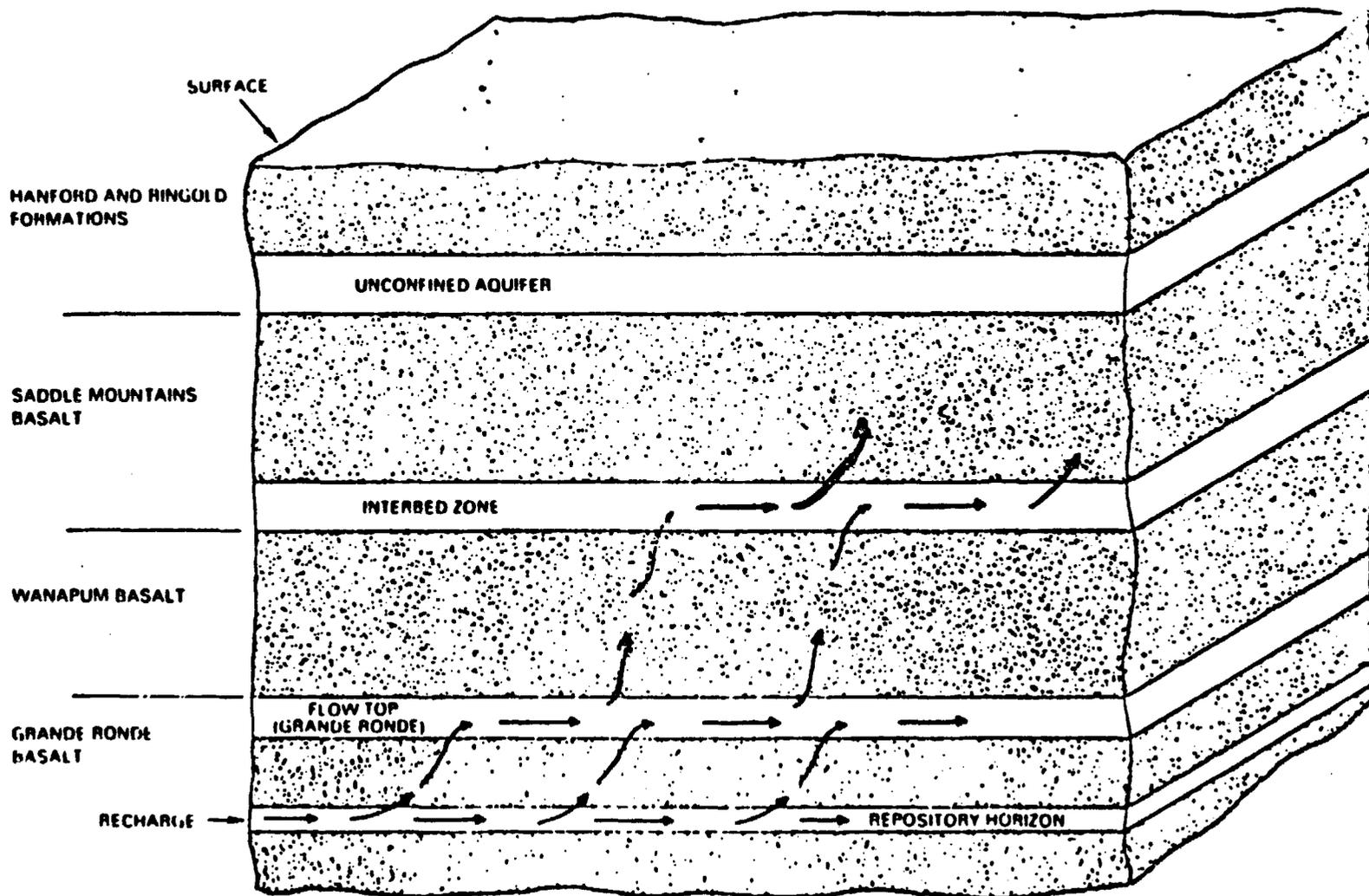
## **◆ POSSIBLE LOCATIONS OF VERTICAL MOVEMENT OF GROUNDWATER**

- ▲ HYDROLOGIC BARRIER?**
- ▲ WITHIN THE RRL ZONE?**
- ▲ ACROSS THE HANFORD SITE BUT ENHANCED  
IN THE RRL DUE TO HIGH VERTICAL PERMEABILITY?**
- ▲ ALONG MAJOR STRUCTURAL FEATURES?**

## **◆ POSSIBLE MECHANISMS OF VERTICAL MOVEMENT OF GROUNDWATER**

- ▲ DIFFUSION?**
- ▲ RESPONSE TO VERTICAL HEAD GRADIENTS?**

# SCHEMATIC GROUNDWATER FLOW PATH



(SRK Figure 11-20)

## **FUTURE PLANS- CONCEPTUAL FLOW MODEL**

### **◆ ATTEMPT TO CONFIRM MIXING AND REFINE MIXING ZONE**

**▲ RESAMPLE SELECTED BOREHOLES**

**▲ CONSIDER DRILLING ADDITIONAL BOREHOLES**

**▲ INTEGRATE HYDROCHEMISTRY WITH RESULTS OF THE PIEZOMETRIC NETWORK AND HYDROLOGIC MODELS**

### **◆ EVALUATE THE POTENTIAL SIGNIFICANCE OF METHANE IN THE RRL**

**▲ IMPROVE SAMPLING AND ANALYSES OF GASES**

**▲ EXPAND THE NETWORK OF GAS SAMPLE SITES**

**▲ CONSIDER THE ADVISABILITY OF A DEEP BOREHOLE**

### **◆ EVALUATE THE ROLE OF THE HYDROLOGIC BARRIER IN GROUNDWATER MIXING**

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