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# NUCLEAR REGULATORY COMMISSION

**Title:** BRIEFING BY NATIONAL AND WYOMING MINING ASSOCIATIONS - PUBLIC MEETING

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING BY NATIONAL AND WYOMING

MINING ASSOCIATIONS

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PUBLIC MEETING

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Nuclear Regulatory Commission

Commission Hearing Room

11555 Rockville Pike

Rockville, Maryland

Tuesday, May 13, 1997

The Commission met in open session, pursuant to notice, at 2:04 p.m., the Honorable SHIRLEY A. JACKSON, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

SHIRLEY A. JACKSON, Chairman of the Commission

KENNETH C. ROGERS, Member of the Commission

GRETA J. DICUS, Member of the Commission

EDWARD McGAFFIGAN, JR., Member of the Commission

NILS J. DIAZ, Member of the Commission

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

JOHN C. HOYLE, Secretary

KAREN D. CYR, General Counsel

RICHARD LAWSON, NMA

CREW SCHMITT, Uranium Producers of America

WILLIAM KEARNEY, Power Resources

JOHN HAMRICK, UMETCO

RICHARD ZIEGLER, Cotter Corporation

ANTHONY THOMPSON, Shaw, Pittman, Potts & Trowbridge

PROCEEDINGS

[10:00 a.m.]

CHAIRMAN JACKSON: Well, good afternoon, ladies and gentlemen. I apologize for my tardiness. We were doing an emergency exercise, which we do periodically.

Today, representatives of the National Mining Association, the Wyoming Mining Association and the Uranium Producers of America have requested an opportunity to brief the Commission concerning the current status of the industry and issues of concern to uranium recovery licensees. We are looking forward to hearing today's presentation from these representatives of the uranium recovery industry. I understand that copies of your presentation material are available at the entrances to the room and so, unless my fellow commissioners have any comments to add, Mr. Lawson, would you please begin?

MR. LAWSON: Thank you very much, Chairman.

May we start out with introductions from our side who are present, please?

MR. HAMRICK: I would like to introduce myself. I am John Hamrick, Manager of Health Safety and Environmental Affairs for UMETCO Minerals Corporation and also the Environment Subcommittee Chairman of the Uranium Policy Counsel of the National Mining Association.

UMETCO currently holds three licenses, actually a

few more than that including gauge licenses. But we have the Maybell Title 2 facility, we have the Gas Hills facility which is regulated by the NRC. Maybell and our other facility, Uravan, in Colorado, are agreement state licenses.

MR. ZIEGLER: My name is Rich Ziegler. I am with Cotter Corporation. We are a wholly owned subsidiary of Commonwealth Edison out of Chicago. We have a license with the state of Colorado. We are an agreement state and are responsible in the end to the NRC.

Thank you.

MR. THOMPSON: My name is Anthony Thompson. I am the outside counsel to the National Mining Association's Environmental Subcommittee.

MR. SCHMITT: My name is Crew Schmitt. I am President and CEO of Power Resources and also President of the Uranium Producers of America. I also represent GMX Minerals. Power Resources projects are located in Wyoming. We have the in situ leach project at Highland. We are currently in the process of applying for a license for Gas Hills operations and through GMS Minerals we have the Crow Butte operation in Crawford, Nebraska.

Thank you.

MR. KEARNEY: Good afternoon. I am Bill Kearney with Power Resources located at the Highland Uranium Project and I am also representing the Wyoming Mining Association

today.

CHAIRMAN JACKSON: Are there any others?

MR. LAWSON: Yes, we have some other licensees in the audience.

MR. KRAFT: Yes, my name is Fred Kraft. I am representing U.S. Energy, which has a license with Green Mountain Mining Venture out of Red Desert in Wyoming and at the Sweet Water Conventional Mill, Plateau Resources at the Shootaring Canyon Mill and Yellowstone Fuels, which is an ISL.

MR. INDALL: My name is John Indall. I am an attorney from Santa Fe, New Mexico, and I am General Counsel for Uranium Producers of America.

MS. REHMANN: My name is Michelle Rehmann. I am Environmental Manager for International Uranium Corporation. We took possession of a license on Friday for the White Mesa Mill near Blanding, Utah.

MR. POYSER: I am Bob Poyser. I represent Cogema and specifically representing Pathfinder Mines Corporation and Cogema Mining, Inc., which have together seven licenses.

CHAIRMAN JACKSON: Thank you.

We won't introduce ourselves -- oh, we still have more. Please.

MR. PAULSON: My name is Oscar Paulson. I am facilities supervisor for the Sweetwater Uranium Project

near Rollins, Wyoming, and I am here representing Kennecott Uranium Company.

Thank you.

MS. SWEENY: I am Katie Sweeney, Associate General Counsel for the National Mining Association.

CHAIRMAN JACKSON: We aren't going to introduce ourselves. Hopefully we know who we are.

MR. LAWSON: All right.

Well, thank you for the time today for us to present ourselves.

The National Mining Association was actually formed in 1995 by the merger of the National Coal Association an organization of about 65 years old, and the American Mining Congress, an organization about 75 years old. We represent coal and hard-rock producers, the manufacturers and support agencies that support them. Also, all of the State associations in the country representing the mining industry are members.

We are presently mining in 50 States. Indeed, from a political standpoint, we're mining in 397 of the 435 districts of the United States. Last year the American economy used 40,000 pounds of metals and minerals per person, plus an additional 7,000 pounds of coal to provide electricity, and approximately a half-pound of uranium to provide electricity. We produced 57 percent of the

electricity with coal and about 21.6 percent of the electricity used by the Nation with uranium. About 30 percent of the gross national product results from this activity.

We're involved in Federal and international activities in both regulative, legislative, public relations, and educational projects. We have dealings with DOI, DOL, Commerce, State, DOE, and several regulatory bodies. In addition we've become recently extraordinarily involved in a number of international forums that are beginning to enter into the activities of the mining industry of the United States, the United Nations, various international labor, health, and safety groups, trade, and market mechanisms.

Among our member mineral processing companies are 12 uranium recovery licensees. These uranium recovery licensees are represented by the Uranium Policy Council and the Uranium Environmental Subcommittee within the organization.

Mr. John Hamrick, the chairman of the Uranium Environmental Subcommittee, will now provide you with a brief history of the activities of these NMA committees.

MR. HAMRICK: Thank you, General Lawson.

I'd like to touch a little bit on our purpose for being here today, which is to give you an update on the

status of uranium recovery operations, and in doing so our intention is to present and discuss perhaps some of the issues that the licensees see as being perhaps burning ones at this time, and in addition later we're going to extend an invitation to the Commissioners to either individually or in groups, whatever may be appropriate, to visit some of our facilities, because some of them are quite large and it's a little bit difficult sitting here around a table to get a true feeling for the magnitude and the different issues that face those facilities. We also are hopeful that we're opening a dialogue here with the Commissioners and we would like to be able to continue that dialogue.

With that I'd like to say just a few words about this organization that General Lawson has certainly covered, the National Mining Association, which is essentially a national organization covering multiple sectors of the mining industry, the Uranium Producers of America, which is also a national association, but with the express coverage of the uranium sector, and then the Wyoming Mining Association, which is again a State association that represents multiple sectors in the minerals industry, with a large proportion of uranium producers being members of that organization.

With that we'll kind of go to the slides here. I would like to say just a couple, a few other points about

the Uranium Policy Council and the Environmental Subcommittee, that the Uranium Policy Council is the supervisory or administrative body for the Environmental Subcommittee. The UES is the technical or regulatory-affairs arm of the policy council. We do represent NMA members on a full range of regulatory, legislative, and litigation issues. Including as members of the American Mining Congress, eventually the National Mining Association, we participated in the NRC GEIS rulemaking process and various EPA rulemakings. We also were instrumental in helping rescind subpart T -- 40 CFR, part 60, subpart T -- the radon rules for inactive tailings. We've also commented and provided input to staff on various branch technical position papers and alternate concentration limit issues.

The membership is composed of four general sectors, and those are the, if I skip around a little bit, the producers, who are composed of conventional mills, those that are operational have operating licenses, those that are on standby and desire to become operational, the uranium in situ operators who continue to produce uranium today. In addition we have the licensees that are endeavoring to get to license termination, and so are heavily involved in the remediation process, and then we also have producers of uranium as by-products or co-products of other processes. The location of the uranium recovery licensees tends to be

clustered around where the ore deposits are, which are mainly in the West in Wyoming, Nebraska, Colorado, New Mexico, Texas, and Utah.

To give you an idea of the number of facilities that we're talking about here on this slide we have listed 19 in situ leach facilities that tend to be clustered in Wyoming and Texas with a couple in New Mexico, and the conventional mine and mill facilities are also mainly clustered in Wyoming, New Mexico, Utah, and Colorado. What is not shown on here for the Colorado area is the numerous small mines that supported those mills when they were operating.

I would like to say a few words about our perspective on our relationship with NRC staff, and we think that we have an excellent working relationship with staff, and we try to provide them with comments, and they have tended to be very responsive when they have responded to us in the materials they've given us. There's not always been general agreement among us about what needs to be done or perhaps things can be done, but I think that's to be expected, and that is part of the reason we're here today, is because we think that there are policy issues out there that can be and need to be addressed by the Commission, that their appropriate resolution lies at that level. So that's part of our purpose.

With that, I'll turn the presentation over to Crew Schmitt. He introduced himself earlier, but he'll be talking about the Uranium Producers of America and some of the economics of the industry.

MR. SCHMITT: Thank you, John.

It was a pleasure to have this opportunity to participate in this briefing of the Commission on the current status of the uranium recovery industry.

As John said, the Uranium Producers of America is the national organization representing companies with production centers in half a dozen States, Western States primarily. As licensees we have ongoing communication and interaction with the NRC staff.

There are several key issues facing our industry at this time. Those relating to regulation will be dealt with in the latter part of the presentation. It might be helpful for your understanding though to set the stage with a little historical background and update on the current status and some thoughts about the future relating to our industry.

As you know, the uranium industry was born as a weapons program. Later it was expected to supply the Atoms for Peace program, promising electricity too cheap to meter in hundreds of nuclear powerplants. Finally today we've reached a point of relative stabilization where uranium

requirements are expected to grow at a much more modest rate, on the order of 1 percent per year.

Although stable growth, this is certainly not the expectations we had in the seventies, when there were high expectations for nuclear. The annual uranium production in the United States exceeded 40 million pounds per year. This slide that we see overhead right now reflects the employment at its peak. At that time 40 million pounds represented in excess of 20,000 jobs. Today actual production is closer to 6 million pounds, and today the industry is closer to 1,000 jobs.

In yesteryear, a producer's competitor was over the next hill. Today, primary uranium producers' competition is Government stockpiles built up over a 50-year cold war era. The slide that is now up, this slide shows the price over the last 10 years reflecting the impact these inventories have had on the market. You can see there is significant volatility as there has been different perceptions of this material coming into the marketplace.

CHAIRMAN JACKSON: Now this comparing -- that's the Commonwealth of Independent States? I mean, what is the CIS price?

MR. HAMRICK: CIS is the Commonwealth of Independent States. The other represents material that is outside of the Commonwealth.

Integration of nuclear weapons materials into the commercial market is essential in removing the nuclear threat. The Uranium Producers of America wholeheartedly support this integration. To that end we have worked aggressively with other stakeholders to establish a rational disposition of these materials. Agreements between the United States and the former Soviet governments and legislated schedules established with USEC Privatization Act represent a rational disposition of these materials. These disposition schedules allow primary production and Government stockpiles to enter the commercial market without significant disruption.

To be competitive today the United States uranium industry, the group that is here today discussing with you, has had to adapt. As you know from the previous slide, and we're talking in excess of 20,000 jobs down to something on the order of 1,000 today, it's been a significant adaptation. This adaptation is to competition from the Government stockpiles. It's also adapting to compete with higher-grade deposits outside of the United States. As a result, today the United States uranium industry is comprised of in situ leach production centers. These will be described in detail a little later. For us to be competitive in the future in the U.S. uranium industry, we must have technological innovation in order to be able to

compete in cost, and we must be extremely flexible to take advantage of market opportunities. As you saw from the slide, prices are all over the map at this point in time with the perception of the stockpiles.

This innovation must be in the technical and in the regulatory arenas. This does not necessarily mean compromise of principles on either side. Rather it simply means that much as many industries have had to seek unique solutions to their competition, we have to forge new ways of working together if our industry is to survive. I am confident that we can find solutions necessary to preserve the primary uranium recovery industry and maintain the mandate of the Nuclear Regulatory Commission with respect to our industry.

I look forward to working with the NRC in seeking these unique solutions. Thank you for your attention, and I'm going to pass this on to Bill Kearney, chairman of the Wyoming Mining Association Uranium Committee.

Bill.

MR. KEARNEY: Thank you.

On behalf of the Wyoming Mining Association, I'd like to thank the Commissioners and others for taking the time to meet with us today. The Wyoming Mining Association, also known as WMA, is an industry association that represents bentonite, gold, coal, trona, and uranium

companies and mining associates such as vendors and suppliers and contractors in Wyoming. Wyoming leads the Nation in the production of bentonite, coal, soda ash, produced from trona, and uranium. The membership consists of 35 mining companies, 120 supply companies, and 5 electrical utilities.

The next slide shows the uranium projects in Wyoming. They are located in the historic uranium mining districts in the central and northeastern portions of the State. You can see where Casper, one of two major cities in Wyoming, is located.

Uranium was first produced in Wyoming in 1947. Production peaked at about 12 million pounds per year in 1980 when the work force numbered over 5,000 people. Production in 1997 is expected to approach 3 million pounds, and this production will be about 50 percent of the uranium produced in the United States. So, as you can see, this is an important commodity to the State of Wyoming to the economy.

Projections indicate that the production could be as much as 9 million pounds by the year 2000. If you look back at the projects in Wyoming, a quick summary of that shows that there's three operating in situ sites, one in situ site that's about ready to go into production anytime, several proposed in situ projects, several reclamation

projects at conventional mills, and two proposed conventional mines.

At this point we're going to change gears a little bit by providing a brief overview of the types of uranium operations licensed by the NRC. These include in situ leaching, uranium mill tailings reclamation, and conventional milling, including standby status. Rich Ziegler is going to cover the last two types of operations, and I'm going to give a quick overview of the in situ mining process.

If you look at the screen, it's probably different than your book, but the orebody definition by drilling should be the first thing. You need to go out and find where the uranium is first. A lot of drilling goes into delineating where the ore body is. After it's located, geophysical logging's completed, the well fields are laid out, and wells are installed. After the wells are installed, the production operations begin, injection and recovery of fluids, ion exchange, and then the precipitation of yellowcake and the packaging. Some by-product materials are dealt with and wastewater is disposed through deep well injection, evaporation, land application, and discharge under NPDES permits. The final step of the process is groundwater restoration and surface reclamation and decommissioning.

The next slide depicts and idealized in situ mine. The uranium lies in sandstone aquifers anywhere from a couple hundred feet underground to upwards of 1,000 feet in Wyoming, and wells -- injection and production wells -- are drilled into the ore body to aid in the extraction of the mineral, and monitor wells are installed in zones adjacent to it and usually above and below it.

The next slide has a little more detail of a row-front uranium deposit, which is the type of deposit typically in situ mined. It shows injection wells on the outside with a production well in the middle. Basically the process is nothing more than a large plumbing project where native groundwater that's in the ground is circulated, typically gaseous oxygen and CO2 are added to this solution which dissolves the uranium out of the rock, typically a tenth of a percent uranium by weight. It's pumped to the surface and run through an ion-exchange column. Where, similar to your home water softener, the uranium is taken out and loaded on a resin. From there, it is eluted and processed into the final product, which is yellow cake.

Then the next slide shows, to give you an idea of what some of the facilities look like, well field construction. These are when the wells are being put in, minimal environmental disturbance. The second aerial shot there shows an operating well field at the Highland Uranium

Project. The little houses are header houses where the flow from the wells is collected.

The satellite plant shows the ion exchange columns where the resin where the uranium is taken out of the groundwater before it is refortified with oxygen and carbon dioxide and reinjected into the ground.

The main plant site is where the uranium is processed into the final product, yellow cake in the drum. And then land application is just intended to show you what the irrigation facilities look like where one of the common practices is to irrigate your treated wastewater.

With that, I will turn it over to Rich Ziegler who will cover the steps in conventional milling operations.

MR. ZIEGLER: Thank you, Bill.

I want to make sure that you, the Commission, understands that we are the real miners. We are the conventional miners.

[Laughter.]

MR. ZIEGLER: Today we will talk about the conventional. There are a few of us left. As you are -- the brochure here indicates, the first one we would like to discuss is the Sweetwater mill, it is up in Sweetwater, Wyoming. Ours is located in Canyon City and there is one in Blanding and Tikaboo.

But it is a typical, conventional mill. It has

the same principles as all conventional mills, a grinding area, a leaching, a thickener or autoclave system which, in turn, goes to a solvent extraction. For your information, those buildings that you are looking at on your right are what I am talking about, the grinding, leaching, thickener, solvent extraction. And then we go into a precip, yellow cake, and that is where it is produced. The residue goes into the tailings impoundment. All of the conventional mills are basically the same as that, as the next page indicates.

The reclamation process, there are several steps into it. We have to do the dewatering, continuous dewatering. The leveling, which allows us to apply a radon barrier, settlement, the radon barrier construction which entails the erosion protection which is in a variety of methods or forms, either through rocks on the side, mulching, top-soiling, whatever it is, that is -- and then final, what we are doing at our mill in Canyon City, the final portion of it is the final groundwater cleanup. That entails ACLs and limitations, deep well injection water and things of that sort.

So that is pretty much on the conventional.

The one that you see now is a facility of the UMETCO area at Gas Hills and in the top portion, this site actually represents about 1200 acres. At the top, you can

see the above grade reclamation area. In the middle portion is the heat leach that is covered. Both of those are covered now. And currently what UMETCO is doing is processing grade and the below grade, I believe.

MR. HAMRICK: Stabilizing materials or bringing materials in there, in addition to doing s other things.

MR. ZIEGLER: But that's pretty much what the conventional -- with that, I would like to turn it over to Mr. Tony Thompson, who is going to discuss regulatory issues.

MR. THOMPSON: Good afternoon.

I am going to just touch on some regulatory issues that the uranium recovery licensees think are of some importance. NRC recently undertook its strategic assessment rebaselining initiative and in the context of that kind of an approach to things, the uranium recovery licensees, in their comments to NRC, suggested that since there were a lot of issues on the uranium recovery side of the house that had been addressed over time when they came up rather than as part of a sort of strategic consideration, that it might be time to consider some of these decisions and how they were posing potential problems for uranium recovery licensees in some sort of coherent, strategic fashion.

One of the concepts that we have been discussing amongst the uranium recovery licensees are to prepare a

white paper to present to the Commission some of these issues and their views on the issues with a view to, perhaps, having the Commission take a fresh look at these from a sort of strategic overview position.

The issues that I am just going to touch on today are the issue of NRC jurisdiction over ISL well fields, NRC's Uranium Recovery Branch effluent disposal guidance, NRC's non-11e(2) disposal policy and the issue of concurrent jurisdiction. Concurrent jurisdiction being concurrent jurisdiction by non-agreement states over the nonradiological components of 11e(2) byproduct material.

NRC asserted jurisdiction over ISL well fields back around 1980 based on a memorandum from the legal section at NRC. It has led to some duplicative regulatory oversight between and among NRC, EPA and non-agreement states. Traditionally, under the Atomic Energy Act, the AEC and later NRC have not regulated uranium mining until the source material is removed from its place in nature. That is certainly so with respect to underground uranium mines and surface uranium mines which really aren't regulated until the source material reaches the mill site. However, in the context of ISL operations, the material is regulated underground before it gets to the surface and before it achieves the .05 percent concentrations of licensable source material.

Basically, the assumption here was that processing the ISL leaching process underground is essentially the same as the process of processing the ore on the surface in a conventional mill. Now, that has posed some problems for us when we look at the issues associated with staff guidance on effluent disposal. And, also, with the non-11e(2) policy as I will indicate.

Process waste from ISL operations are treated as 11e(2) byproduct material but the wastes from restoring the ore body, that is the underground ore body, are treated as mine waste and therefore are not 11e(2) byproduct material.

So the surface sludges that are created by the process wastewater and the surface sludges created by the restoration wastewater are, although the same thing, in fact treated differently. And part of that is, I guess, because deciding that -- and here is where some of the illogic comes in -- that processing the underground ore body in the ISL context, the contaminants that are built up in the ore body are not 11e(2) byproduct material. So when you are restoring it, it is mine waste. Whereas, the contaminants that build up in the ground, leaching from a mill tailings facility, are 11e(2) byproduct material.

So we have a situation where frequently at ISL facilities, for example, restoration fluids and process fluids go into the same radium, barium settlement ponds and

therefore there is a mixture of sludges which is 11e(2) and non-11e(2) or norm, which is not subject to Atomic Energy Act jurisdiction. So we have some potential conflicts here that make the, as we will see when we go to look at the non-11e(2) disposal policy, they make both the operators of the conventional facilities and the ISL operators nervous.

Under criterion two in 10 CFR Part 40, Appendix A, the wastes from the 11e(2) byproduct material from ISL operations is supposed to go to and be disposed of in uranium tailings facilities. There was a concern with the non-11e(2) byproduct material policy that if things that weren't 11e(2) were put into mill tailings impoundments that DOE might balk at taking title or states or EPA or others might assert jurisdiction over those facilities. And what we have seen now is that some of the wastes that have come from ISL operations are clearly under the definitions we have now mine waste norm and not 11e(2) byproduct material and they are already in the mill tailings facilities.

So it concerns the operators of the ISL facility because they want to have someplace to send their waste. It concerns the operators of the conventional facilities because they don't want to have anything interfere with their ability to terminate their licenses.

Finally, all of these issues, we think, are likely to be compounded by the concurrent jurisdiction issue.

Recognizing that NRC, of course, traditionally, and AEC before it has preempted on health and safety issues associated with radiation. However, in the Mill Tailings Act amendments to the Atomic Energy Act, Congress explicitly directed EPA and NRC to regulate both the radiological and nonradiological components of 11e(2) byproduct material produced by uranium recovery operations.

CHAIRMAN JACKSON: Let me make sure I understand.

Have there been problems to date or are you anticipating problems?

MR. THOMPSON: There have been some problems to date and basically what has happened is that particularly with respect to groundwater where you may be able to say, well, we see a nonradioactive contaminant like sulfates, even a nonhazardous contaminant, that is moving from the groundwater that was as a result of production operations at a conventional facility, with the non-agreement state having concurrent jurisdiction over that, there is concern that NRC may not want to terminate a license if we comply with NRC requirements but the agreement state isn't satisfied.

Secondly, there have been indications from several agreement states -- non-agreement states, excuse me, that because the cover on the tailings facility is also there to inhibit infiltration which would impact groundwater contamination over the 200 to 1000 year time frame, that

they are entitled to look at the surface stabilization plans of the facilities as well. And basically the concern here is that we are going to get into a dilemma where we can't make a decision where we have a situation where the NRC says, and in fact the NRC says maybe we can't terminate this license even though you have complied with our regulatory requirements because we don't want to turn over a site to DOE where DOE has a concern that a state may be asserting some claim of jurisdiction.

We believe that there is -- it was even in the NRC legal memorandum in 1980 considered a close question. We believe that the answer is better that there is preemption on the part of NRC.

It raises some questions about the viability of the agreement state program if, indeed, non-agreement states, without making these commitments, can insert themselves into these regulatory decisions and it certainly is going to increase the difficulty in closing sites. Some of the more controversial sites, some of them in Utah, that are getting a fair amount of publicity now, there may be problems trying to go to final closure.

Those are some of the important issues that we think may well be worth taking a fresh look at, not just looking at the decisions as they were made at the time. But looking at where we are now and where things are now as

part of a strategic overview.

The last issue I was just going to mention is that we had -- I say "we," the uranium recovery industry had requested that the Commission modify its proposal on the draft decommissioning and decontamination standards to include not just uranium mill tailings but uranium recovery facilities because they were comprehensively regulated. And if, as we hoped, that rule is final, we appreciate the fact that the Commission and the staff at the Commission listened to our concerns and we are always appreciative of that.

Thank you.

CHAIRMAN JACKSON: Commissioner Rogers?

COMMISSIONER ROGERS: No, I have no questions.

CHAIRMAN JACKSON: Commissioner Dicus?

COMMISSIONER DICUS: I would like to go back to the statement that you made, to be sure I understand it, about the concurrent jurisdiction raising questions about the validity and viability of the agreement state program. If I see if I understand what you are trying to say here, in an agreement state, obviously, it would have total responsibility for both the radiological and nonradiological and are you saying that, in effect, it would never get in conflict with itself?

MR. THOMPSON: Yes.

COMMISSIONER DICUS: Okay, but the requirements

that it might have for the nonradiological could be the same as in a nonagreement state and still hold up the termination of a license, would it not? I am not sure I see where it really undermines the validity and viability of the agreement state.

MR. THOMPSON: Well, I guess it is just that the agreement states take on the responsibility for addressing the whole range of issues and their standards to some greater or lesser extent are the same as NRC's. And ultimate sign-off on the sight is by NRC to approve of the agreement state license termination for transfer to DOE. We have a concern that, for example, a non-agreement state who declines to take title to the facility, wants it to go to DOE, could be in a position of after NRC signs off on the license, regulating that facility. Whereas, presumably, an agreement state is looking at the program, is part of the NRC program, part of the UMTRCA program, all the way across the board. And while those kinds of regulatory issues do come up, it suggests that if an agreement -- a non-agreement state can come in and review your stabilization plan and inhibit the NRC from terminating a license, that -- if you have a dispute with your agreement state about license termination, that is between you and your regulator. But you are not dealing with your regulator, you are dealing with a third party that is sticking their nose into it, in a

sense.

MR. HAMRICK: And I think the point of it is essentially under those terms, Tony, that the non-agreement state then essentially is given the same authority as an agreement state in terms of license termination. That is where we see that the issue comes in, where the challenge, kind of, to the program is.

MR. THOMPSON: And on the preemption issue, traditionally at least, and certainly it has been applied primarily to the radiation protection context, the legislative history and all of the case law and everything say it is going to be one of two entities they are going to regulate, either an agreement state or the NRC and not a third entity.

CHAIRMAN JACKSON: So your specific recommendation in the case involving non-agreement states then is?

MR. THOMPSON: The recommendation is to reconsider the opinion or the guidance and suggest that in the case of uranium recovery licensees under the Mill Tailings Act the NRC does preempt because it is explicitly given authority to regulate the non-radiological constituents. It is the only set of licensees under the whole NRC jurisdiction that are given that authority by statute.

CHAIRMAN JACKSON: Okay, so then let me make sure I understand. So the recommendation is drawing on UMTRCA.

MR. THOMPSON: Yes.

CHAIRMAN JACKSON: You would like the NRC, the Commission, to reconsider the issue of federal preemption?

MR. THOMPSON: Yes.

CHAIRMAN JACKSON: Okay, I just wanted to be sure I understood.

COMMISSIONER DICUS: And again, this isn't something that has happened but you perceive could happen. Or has it happened?

MR. THOMPSON: It is happening.

CHAIRMAN JACKSON: It has happened?

MR. THOMPSON: Yes.

CHAIRMAN JACKSON: Maybe if you could propagate some examples to us, that would be helpful.

Commissioner Diaz?

COMMISSIONER DIAZ: No questions.

CHAIRMAN JACKSON: Commissioner McGaffigan?

COMMISSIONER McGAFFIGAN: It is really on the same point. Are there any impediments on the statute? You basically just answered that the statute would allow what you believe the policy should be. Indeed, you have just said that the statute would encourage us to regulate both the radiological and nonradiological component?

MR. THOMPSON: It requires NRC and EPA to regulate both the radiological and nonradiological and it creates a

new -- the statute creates a new type of byproduct material, that being the 11e(2) byproduct material, which is the waste from uranium.

COMMISSIONER McGAFFIGAN: But once it says NRC and EPA and EPA's agent, typically, on groundwater issues is the state, and so it sounds like the statute may well set up this multiple -- multiple regulation problem.

I am trying to figure out whether this is a policy issue within our control to do something about or whether you all really need to go and get the statute amended.

MR. THOMPSON: I think that we -- we are fairly well convinced that the statute provides the authority, that the statute was directed at a particular source term, uranium mill tailings. It created a byproduct material that is to be regulated explicitly under this statute. It explicitly directs EPA to set generally applicable environmental standards for radiological and nonradiological hazards. NRC is to conform its standards to EPA's generally applicable standards which NRC has done and therefore NRC and EPA, under the Atomic Energy Act are directed to regulate and to provide a level of protection that is essentially equivalent to that provided for hazardous constituents under RCRA. That is in the statute.

COMMISSIONER McGAFFIGAN: So why haven't the -- if the statute is clear and a problem has arisen where a state

is exercising authority that you believe it may not have, why hasn't -- has that been taken to a court?

MR. THOMPSON: It has not been taken to a court as yet and that is certainly one possibility. Essentially, I think we have been told that one way to address this is to have this case taken to court.

One of the things we are considering is whether or not bringing this along with some other issues to the Commission for a fresh look might make more sense than some licensee fighting it out in a particular court somewhere.

CHAIRMAN JACKSON: Anything else?

Well, do you have any final comments you wish to make.

MR. HAMRICK: Yes, we do have a little wrap-up here, Chairman Jackson, and we do appreciate, Chairman Jackson and Commissioners, your time here today, and we want -- we think that this can be very mutually beneficial, an ongoing communication with the Commission similar to the communication and communications that we've had with the staff. We are in process, the National Mining Association and our various groups of investigating further these issues, and we would like perhaps the opportunity to present the white paper to the Commission on the issues as we see it.

In conjunction with that, if that's something the

Commission would entertain, we'd like to reiterate our invitation to the Commissioners individually or in groups to come out and see some of our facilities. It could be that perhaps some Commission business may take you to Denver or to Salt Lake City or something like that that may be an opportunity to arrange visits out to some of our facilities, and we would very much like to bring you out and show you the facilities as they are on the ground, so to speak, with the attendant issues and things that can be perceived directly. And so we think that those things would kind of proceed in parallel perhaps, you know, perhaps a visit at some point, and perhaps if that was possible what we would suggest is that Katie Sweeney of NMA perhaps get with your staffs and talk schedule, if that's something that could happen. One thing though, we would like to remind the Commission that a lot of these sites are in this middle of nowhere, and weather can be a consideration when you want to visit.

COMMISSIONER DICUS: Summer; summer.

MR. HAMRICK: June through August. Perhaps into September.

CHAIRMAN JACKSON: They can go in September.

MR. HAMRICK: Yes. I'm sure the Wyoming Mining Association here could even, if called upon, could entertain us with a few jokes about Wyoming weather, but we'll perhaps

leave that for the visit.

Maybe that's where, if you have no further questions, that's perhaps where we can leave it. We do appreciate your time, and if you have questions, we're more than happy to respond with whatever we have, because these are issues that we have spent a lot of time thinking about, and dealing with in a practical manifestation out in the field.

CHAIRMAN JACKSON: Yes, Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: Could I ask one question? When is the white paper going to be ready to submit to the Commission? You said you've been working on it for some time. When would that be available, because I think it would be --

CHAIRMAN JACKSON: Is it done?

MR. THOMPSON: No.

MR. HAMRICK: No, it's not done.

COMMISSIONER McGAFFIGAN: Because it would actually be more useful in terms of some of these legal issues to have the white paper than the briefing slots.

MR. HAMRICK: Perhaps the fall, early fall, something like that is what we're looking at as far as --

MR. LAWSON: Let me just conclude then by saying that until we meet again, I put a magazine at each of your places, and I've entered your names on my circulation, so

you'll be seeing a little bit about th mining industry every two months from now on.

CHAIRMAN JACKSON: Well, thank you. I think I'd like to thank each of you collectively and individually from the National Mining Association, Uranium Producers of America, the Wyoming Mining Association, and the individual licensee entities. It's been a very informative presentation, and I'm sure the information will be of value.

I echo Commissioner McGaffigan's comments. In fact, it was part of my closing remarks anyway, so to invite -- that's sort of a form of Federal preemption -- invite you to submit the white paper to the Commission. The more timely way you can submit it, the more apt it is to weigh into any deliberations we have on these various topics. I think it's important to lay out carefully what you think the case is based on existing statutes for Federal preemption by the NRC under UMTRCA, and how one gets at the issue that Commissioner McGaffigan raised as to States being EPA's agents with respect to the groundwater issue.

So, unless there are further comments, questions, we're adjourned.

[Whereupon, at 2:56 p.m., the briefing was concluded.]

CERTIFICATE

This is to certify that the attached description of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING BY NATIONAL AND WYOMING MINING ASSOCIATIONS - PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Tuesday, May 13, 1997

was held as herein appears, is a true and accurate record of the meeting, and that this is the original transcript thereof taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company

Transcriber: Christopher Cutchall

Reporter: Mark Mahoney

**AGENDA FOR URANIUM RECOVERY BRIEFING**
**MAY 13, 1997**
**ROCKVILLE, MARYLAND**

1. INTRODUCTIONS (20 MINUTES)

- LICENSEE INTRODUCTIONS (PRESENTERS AND COMPANY REPRESENTATIVES)

ATTENDEES:

Fred Craft, Vice President of Operations, Yellow Stone Fuels, U.S. Energy
John Hamrick, Manager of Health, Safety and Environmental Affairs, Umetco and Chairman, NMA Uranium Environmental Subcommittee
John Indall, Counsel, Uranium Producers of America
General Richard L. Lawson, President & CEO, National Mining Association
William Kearney, Environmental Superintendent, Power Resources
Oscar A. Paulson, Facility Supervisor, Kennecott
Michelle Rehmann, Environmental Manager, International Uranium (USA) Corporation
Crew Schmitt, President & CEO, Power Resources and President, Uranium Producers of America
Katie Sweeney, Associate General Counsel, National Mining Association
Anthony J. Thompson, Attorney, Shaw, Pittman, Potts & Trowbridge and NMA Counsel
Juan Velasquez, President, United Nuclear
Richard D. Ziegler, Executive Vice President, Cotter Corp. and Chairman, NMA Uranium Policy Council

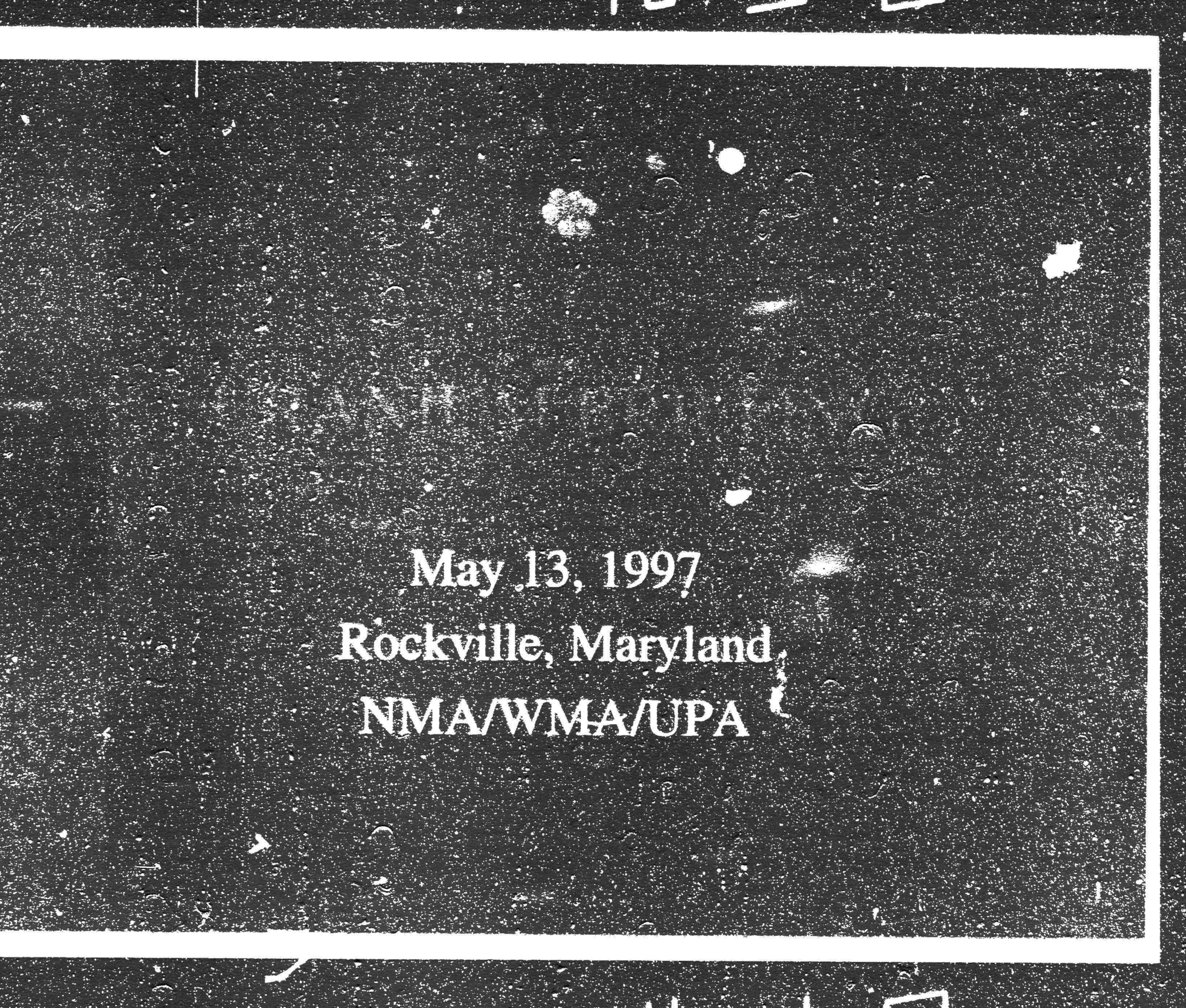
- MEETING INTRODUCTION/INDUSTRY OVERVIEW (Lawson/Hamrick/Schmitt/Kearney)

2. TYPES OF URANIUM OPERATIONS (10 MINUTES)

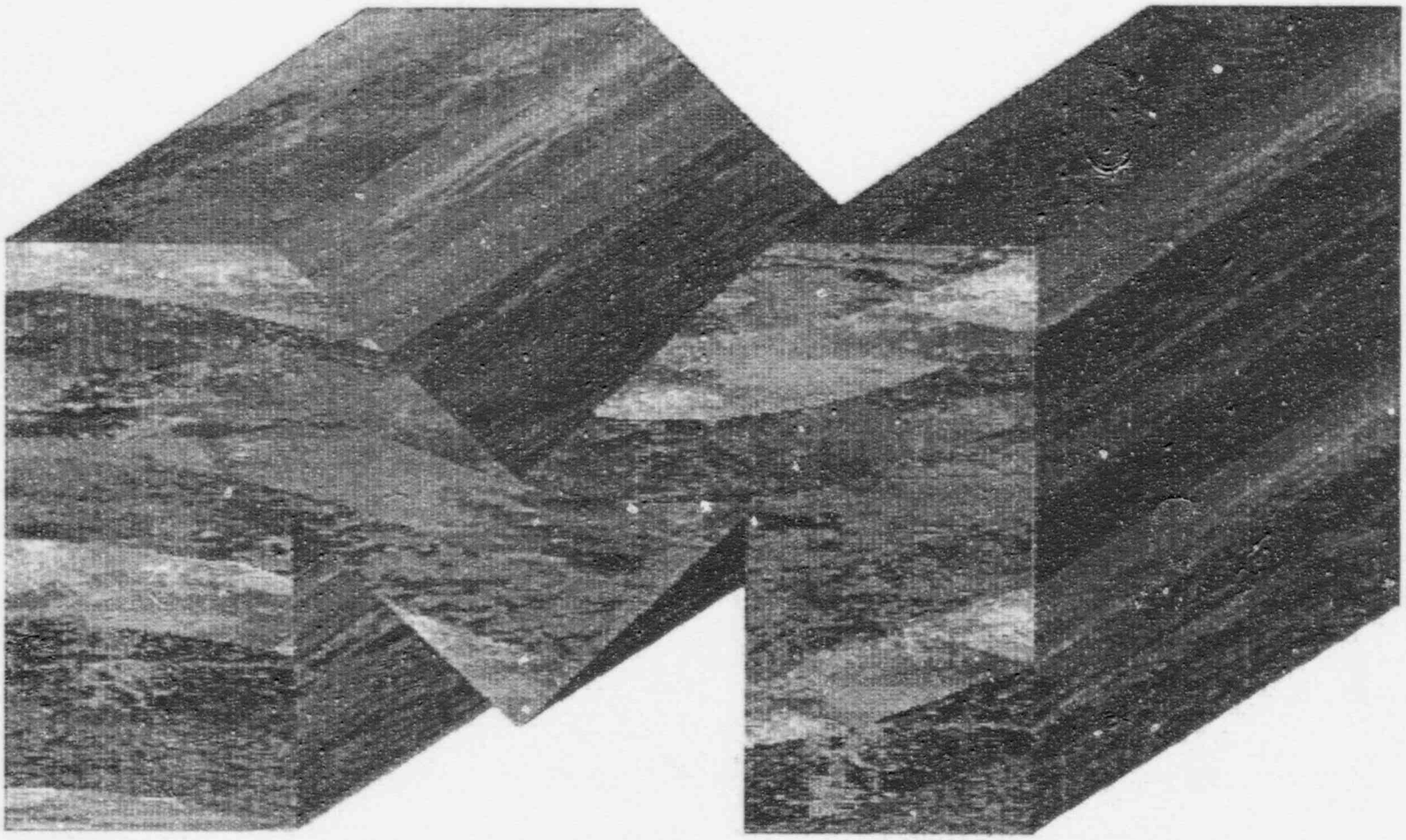
- IN SITU LEACH (Kearney)

- CONVENTIONAL FACILITIES (Ziegler)

-- OPERATING/STANDBY
-- RECLAMATION


May 13, 1997
Rockville, Maryland
NMA/WMA/UPA

# THE NATIONAL RIFLE ASSOCIATION OF AMERICA



# History

# Membership

# History of the Utility Group Council

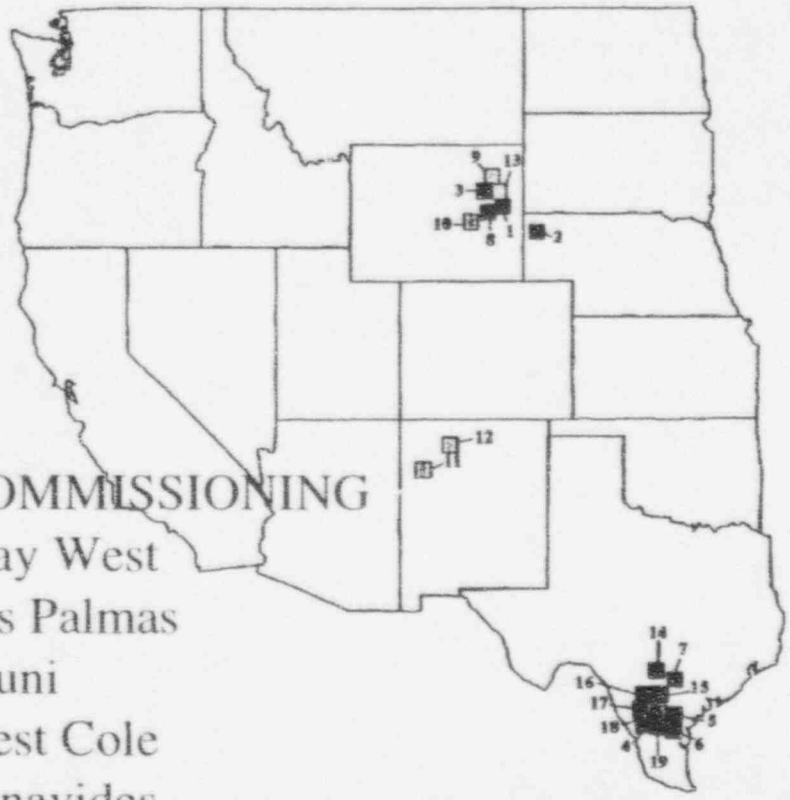
ESTABLISHED IN THE LATE 1970S.

REPRESENT NMA MEMBERS ON A FULL RANGE OF REGULATORY, LEGISLATIVE AND LITIGATION ISSUES AFFECTING ITS NRC LICENSEE MEMBERS.

- Licensees that are no longer producing uranium but are in the process of reclamation and license termination
- Producers of uranium by conventional milling processes
- Producers of uranium by in-situ leaching
- Producers of uranium as a byproduct of other primary production activities (i.e., phosphate production)


WY
NE
CO
WYOMING
NEBRASKA
COLORADO
NEW MEXICO
TEXAS
UTAH

# IN SITU LEACH FACILITIES



## Key ISL Projects

ACTIVE

1 Highland (PRI)
2 Crow Butte
3 Irigary/Christensen
4 Holiday - El Mesquite
5 Rosita
6 Kingsville Dome
7 Hobson

DEVELOPMENT

8 Smith Ranch
9 North Butte
10 Gas Hills (PRI)
11 Churchrock (URI)
12 Crown Point
13 Reno Creek

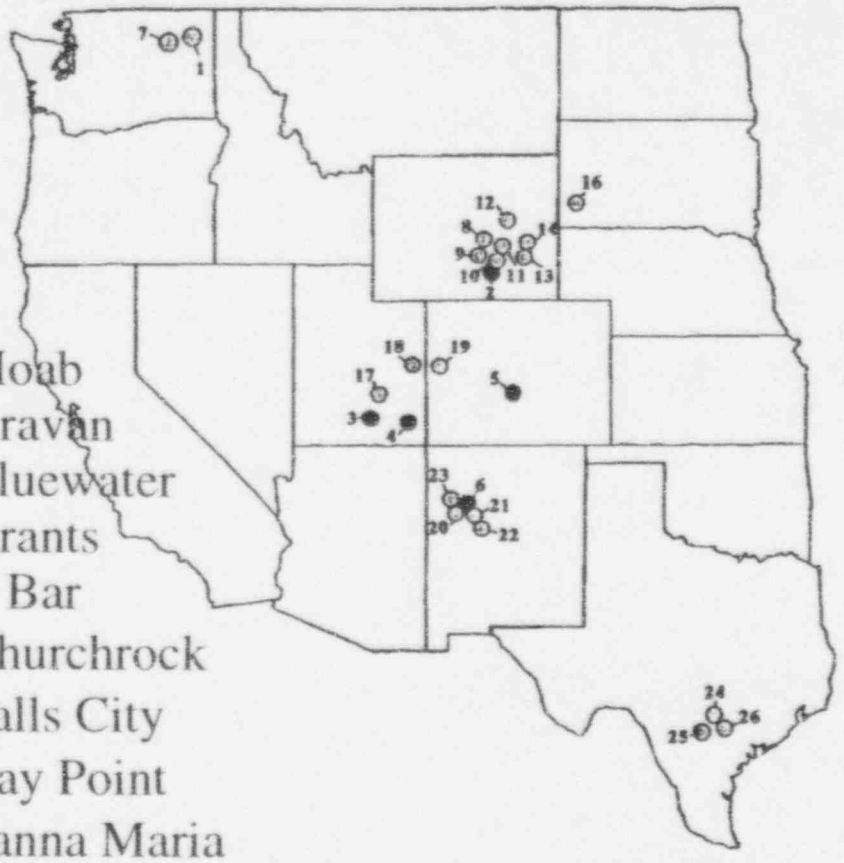
DECOMMISSIONING

14 Clay West
15 Las Palmas
16 Bruni
17 West Cole
18 Benavides
Tex 1

# CONVENTIONAL MINE/MILL FACILITIES

STANDBY

DECOMMISSIONING



18 Moab
19 Uravan
20 Bluewater
21 Grants
22 L Bar
23 Churchrock
24 Falls City
25 Ray Point
26 Panna Maria

1 Ford
2 Sweetwater
3 Shootering
4 White Mesa
5 Canyon City
6 Ambrosia Lake
7 Sherwood
8 Lucky Mc
9 Split Rock
10 Gas Hills (ANC)
11 Gas Hills (UMETCO)
12 Bear Creek
13 Shirley Basin
14 Petrotomics
15 Highland (Exxon)
16 Edgemont
17 Lisbon

EXCELLENT WORKING RELATIONSHIP

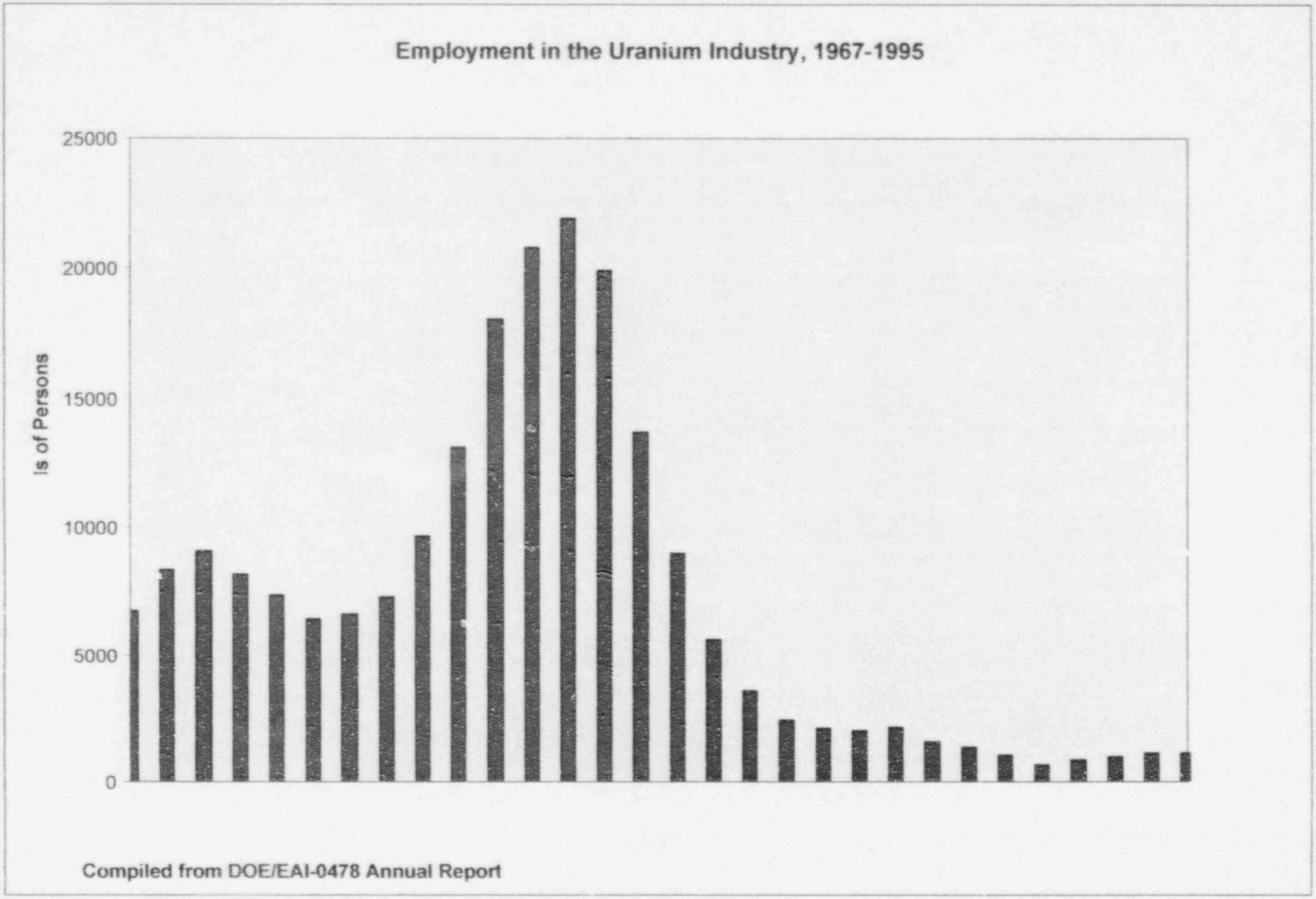
NOT ALWAYS AGREEMENT BUT ALWAYS WILLINGNESS TO LISTEN

SOME POLICY ISSUES CANNOT BE RESOLVED AT STAFF LEVEL

# INTRODUCTION

# ECONOMIC DATA

- HISTORIC PRODUCTION
- EMPLOYMENT
- FUTURE PRODUCTION/ECONOMIC OUTLOOK


Employment in the Uranium Industry, 1967-1995
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5000
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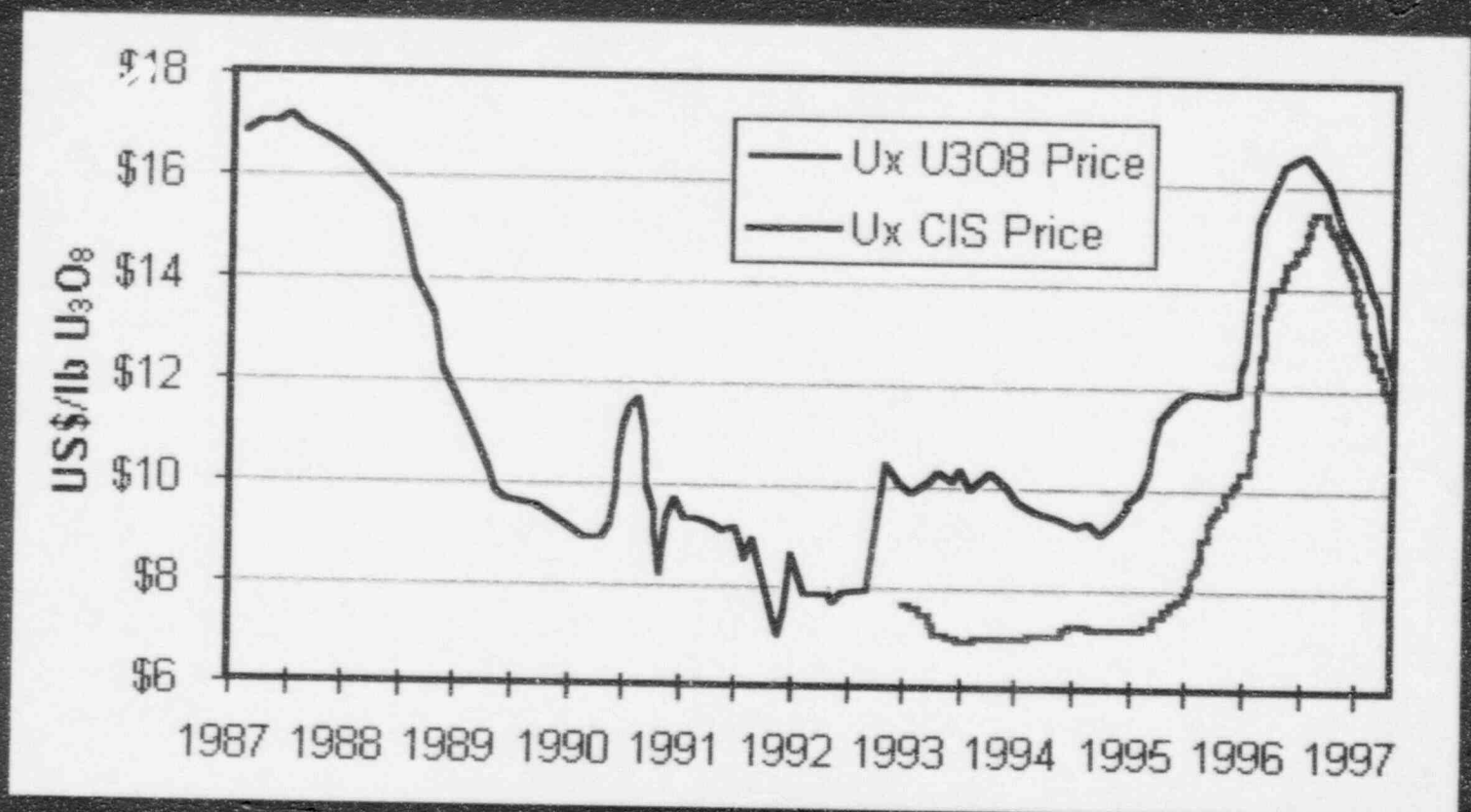
ls of Persons
Compiled from DOE/EAI-0478 Annual Report

# Ux U3O8 vs. CIS Price List

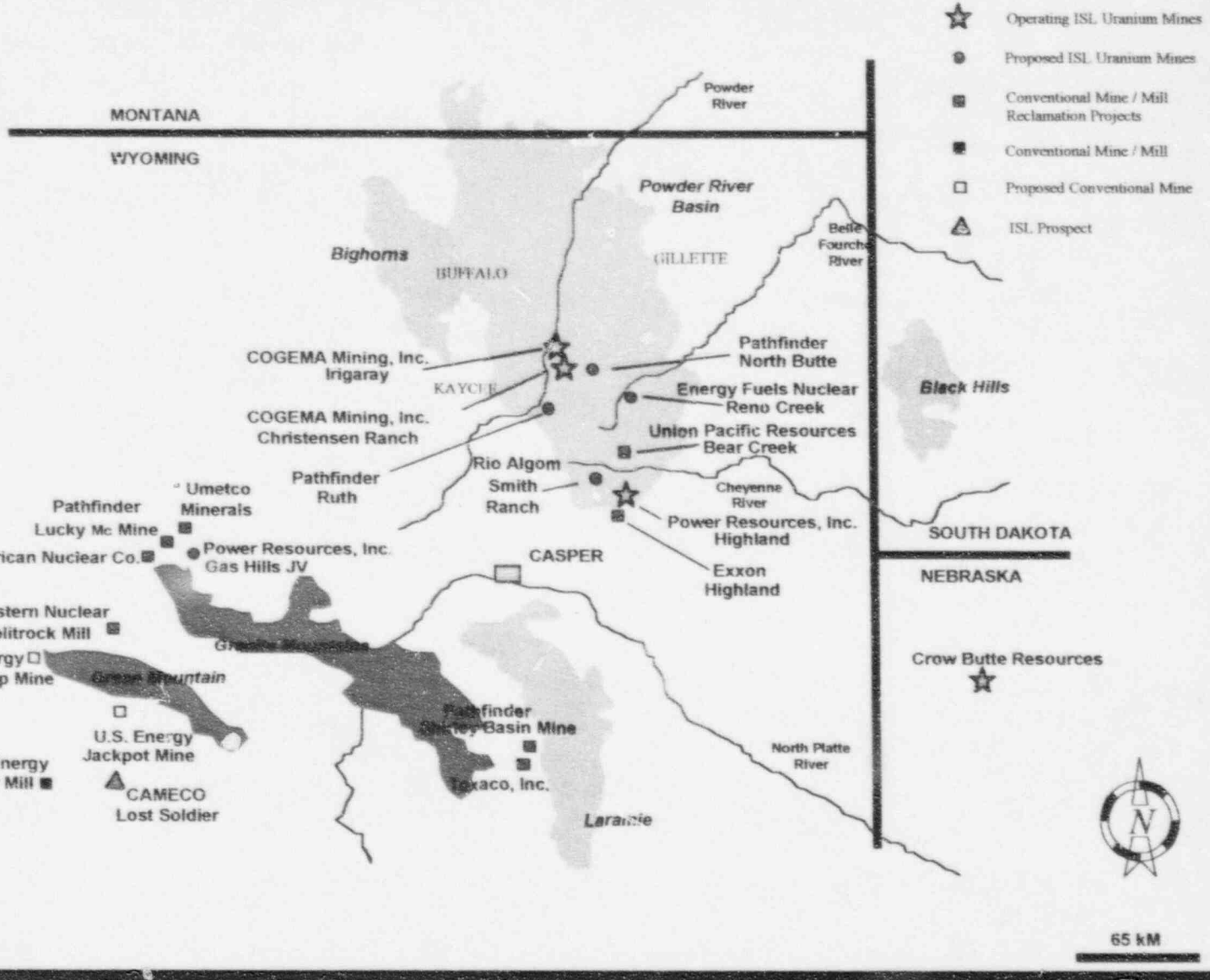


# WYOMING MINING ASSOCIATION

## INTRODUCTION

## DISCUSSION OF SITES

# URANIUM PROJECTS IN WYOMING



- IN SITU LEACHING
- URANIUM MILL TAILINGS RECLAMATION
- CONVENTIONAL MILL (ON STANDBY)

WELLFIELD INSTALLATION

URANIUM PRODUCTION OPERATIONS

- injection/recovery
- ion exchange extraction and concentration
- yellowcake precipitation and packaging

OREBODY DEFINITION BY DRILLING

- wastewater and byproduct material disposal
  - deep well injection
  - evaporation
  - land application
  - discharge under NPDES permit

GROUNDWATER RESTORATION

# IN SITU LEACHING
# GENERAL ARRANGEMENT

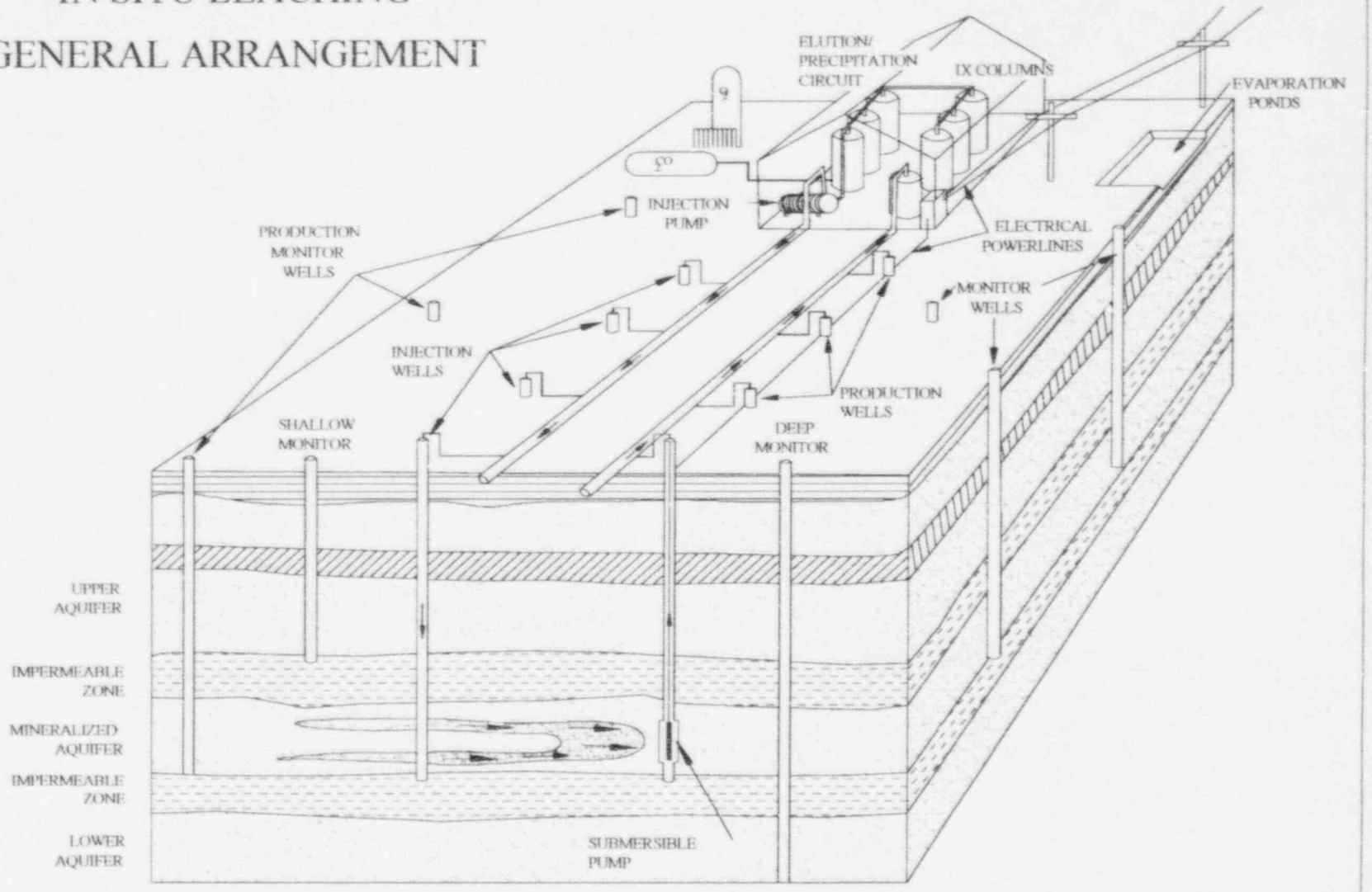
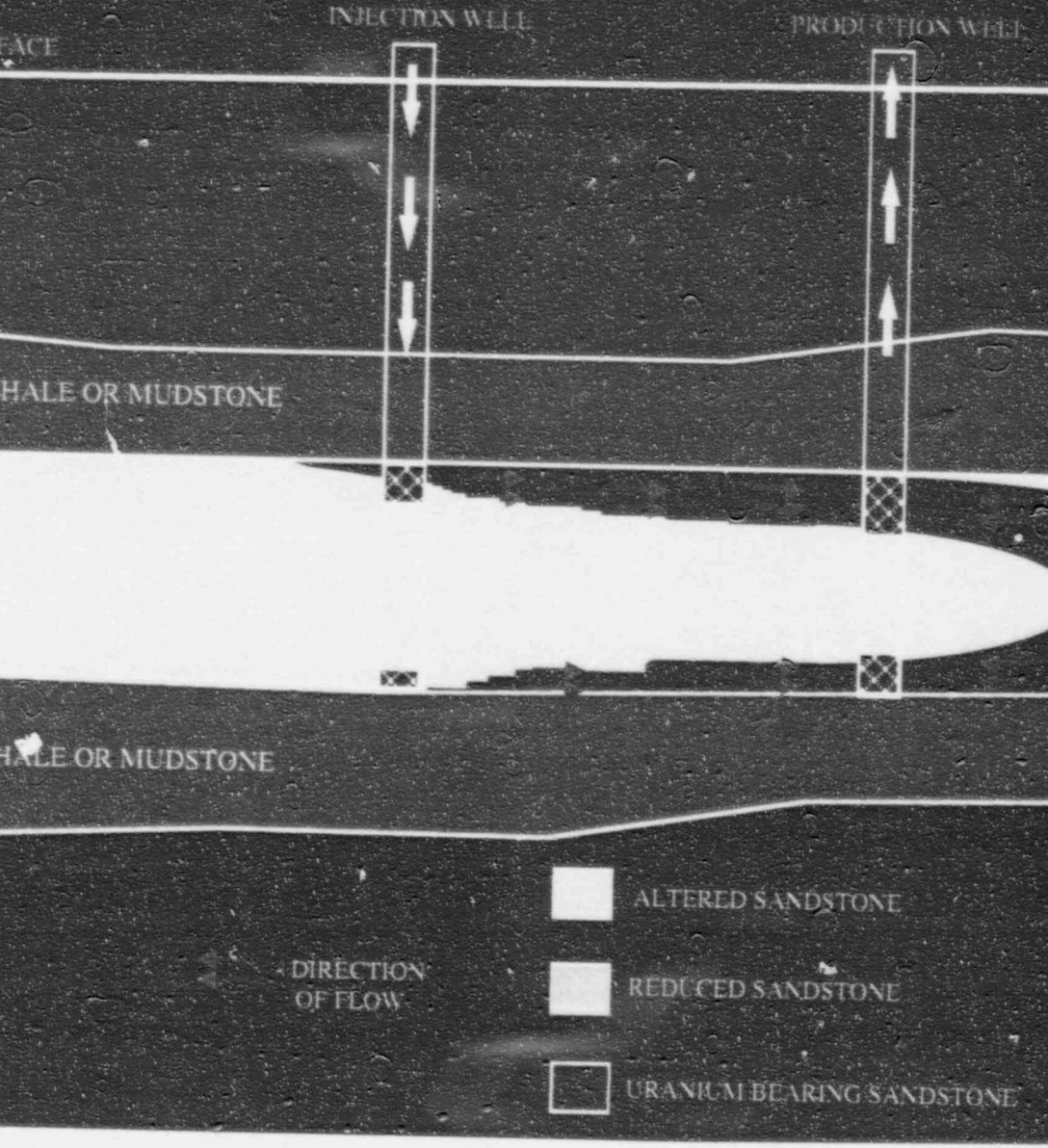


Figure 2

TYPICAL
INJECTION & RECOVERY
WELL COMPLETION INTERVAL



Precipitation

yellowcake

# RECLAMATION STEPS

- Dewatering
- Leveling
- Settlement
- Radon Barrier Construct
- Erosion Protection
- Final Groundwater Clean

- Provoked NMA to consider requ
  assessment of issues impacting u
  licensees
- Over time NRC has addressed a
  that affect uranium recovery lice
  hoc basis as they arise, rather tha
  coherent, strategic assessment
- Result is inconsistent and confus
  applications that have both short
  implications for licensees, NRC,
  Agreement States

- ISL JURISDICTION
- EFFLUENT DISPOSAL
- NON 11(e)2 DISPOSAL
- CONCURRENT JURISD

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  APPROVAL OF SURFACE
  PLANS
- RESULT IS REMINISCEN
  WASTE DILEMMA

- RAISES QUESTIONS ABO
  AND VIABILITY OF THE
  STATE PROGRAM

- RAISES QUESTIONS ABO
  TERM INTEGRITY OF NR
  TERMINATION DECISION
  UMTRCA

- INCREASES DIFFICULTY
  DISPOSING OF WASTES
  EITHER BY CONVENTIO
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