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ENERGY MINERALS ALLOCATION RECOMMENDATION SYSTEM (EMARS)

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HEARING

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS

OF THE

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

SECOND SESSION

HEARING HELD IN WASHINGTON, D.C.

AUGUST 12, 1974

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ENERGY MINERALS ALLOCATION RECOMMENDATION SYSTEM

MONDAY, AUGUST 12, 1974

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON PUBLIC LANDS
OF THE COMMITTEE ON INTERIOR
AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:12 a.m., in room 1302 Longworth House Office Building, the Honorable John Melcher (chairman of the subcommittee) presiding.

Mr. MELCHER. The Subcommittee on Public Lands will come to order.

This morning we are meeting to review progress in the development of the EMARS program, or the energy minerals allocation recommendation system that the BLM has been preparing for review by the public and for review and possible approval by the Secretary.

Our witness this morning is George Turcott. He is Associate Director of the Bureau of Land Management. George, we are always pleased to have you here with us and we appreciate your testimony.

STATEMENT OF GEORGE L. TURCOTT, ASSOCIATE DIRECTOR, BUREAU OF LAND MANAGEMENT, DEPARTMENT OF INTERIOR; ACCOMPANIED BY DR. JOHN MORGAN, ASSISTANT DIRECTOR, BUREAU OF MINES; FREDERICK N. FERGUSON, ASSISTANT SOLICITOR—MINERALS; DALE ZIMMERMAN, CHIEF, DIVISION OF MINERAL RESOURCES; GARY BENNETHUM, STAFF ASSISTANT, ASSISTANT SECRETARY, LANDS AND WATER RESOURCES; LARRY GODWIN, U.S. GEOLOGICAL SURVEY; AND DWIGHT PATTON, DEPUTY ASSISTANT DIRECTOR, MINERALS MANAGEMENT, BLM

Mr. TURCOTT. Thank you, Mr. Chairman.

Because of the many areas of inquiry or the ramifications that this subject can get us into, I have several experts with me here this morning. Two of them are sitting beside me. On my right is Dwight Patton, the Deputy Assistant Director for Minerals Management of BLM, and on my left is Dale Zimmerman, the Chief of the Division of Mineral Resources of the Bureau of Land Management.

Behind me in the front row, I have Frederick Ferguson, the Assistant Solicitor for Minerals; Dr. John Morgan, Assistant Director, Bureau of Mines; Gary Bennethum, staff assistant to the Assistant Secretary, Lands and Water Resources; and Mr. Larry Godwin, U.S. Geological Survey.

Mr. MELCHER. Which is Mr. Bennethum? And George, is Mr. Bennethum the original head of the EMARS program?

Mr. TURCOTT. Yes, he and another fellow. He essentially developed it.

Mr. MELCHER. And what is Mr. Bennethum's title now?

Mr. TURCOTT. He is staff assistant to Mr. Horton, the Assistant Secretary for Land and Water Resources. He is on a detail basis. His real home is still the BLM.

Mr. MELCHER. Thank you.

Mr. TURCOTT. He is a career employee with BLM.

Mr. MELCHER. Yes.

Mr. TURCOTT. I appreciate this opportunity to testify on our energy minerals allocation recommendation system—commonly called EMARS.

At present, EMARS is in a development stage while undergoing departmental review, and as Secretary Horton's recent testimony before this committee pointed out, has not been finally adopted.

EMARS is a planning system for relating energy reserves to energy needs and then determining the size, timing, location, and rehabilitation potential of future lease sales, and as such is a part of the Bureau of Land Management's planning system. The system would, if adopted, be applied to coal leasing initially.

The BLM's management of the public lands and their resources is predicated on a sophisticated and highly effective land planning system. Because EMARS is an extension of this planning system, I will discuss the system very briefly before going into a discussion of EMARS.

The Bureau planning system is a systematic procedure for land use planning for specific areas of geography utilizing major and specific components and processes.

1. The guidance components bring together the policies, standards and criteria established by law, the President, the Secretary, and the Bureau.

2. The information components bring together data on (a) the lands and resources involved, and (b) relevant economic, social, inter-agency, intergovernmental and other factors.

3. The analysis process includes (a) analyzing relevant data, and (b) determining values involved and opportunities for their utilization.

4. The decisionmaking process includes (a) application of guidance and relevant factors to the opportunities determined in the analysis process made to determine the array of alternative program possibilities, (b) the determination of conflicts among these alternatives, and the actions needed to minimize the conflicts and to protect values, and (c) the development of a land use plan for the area.

5. The activity planning process determines the specific actions and programs which are needed to implement the land use plans.

6. The public participation process is operative throughout the planning process and seeks to reach all interested individuals, groups, and agencies for their information, views and advice.

In addition, we have formally incorporated another component, an environmental study process, wherein we will develop, as a component, a strict study of the environment itself.

The Bureau of Land Management is developing EMARS as a potential long-range planning system to make our public land coal resources available for development at minimum environmental cost and in balance with other uses. EMARS consists of three major program elements:

- (1) development of coal leasing goals and trends;
- (2) tract selection; and
- (3) lease issuance.

The process of establishing leasing goals relates inventoried Federal coal resources to industry needs through nominations and industry applications. This information, along with policy directives as to the overall role of Federal coal in the total energy mix, is used to make initial selections of possible coal leasing areas.

In the tract selection phase, the lease recommendations developed in the first phase will be distributed to BLM State offices in coal leasing States via normal budget cycle procedures. The minimum leasing goals identify the amount of coal which should be leased in the next fiscal year, with projections for the subsequent 4 years.

At the BLM district level, Bureau of Land Management minerals personnel; coordinating with the Geological Survey and using industry applications, will "lay out" optimum coal lease sales containing the targeted amount of reserves in areas where effective rehabilitation can be assured, and will prepare mineral activity plans according to established procedures of the Bureau of Land Management planning system that were mentioned earlier.

After public participation, a final planning system decision, based on principles of multiple use, will be made by the Bureau of Land Management's district manager. This will include a site-specific lease recommendation.

The submissions of all the districts will be coordinated at the State level. Each lease recommendation will include definite rehabilitation objectives chosen from the alternatives available, and financed at optimum levels from coal production.

Lease recommendations from the States will then be aggregated at the Bureau of Land Management's Washington Office, into a site-specific, 1-year leasing schedule and a tentative 4-year leasing schedule. This will then be submitted to the Secretary for final consideration, adjustment, and approval.

Leasing recommendations approved by the Secretary of the Interior will be announced as proposed leasing schedules for which the Bureau of Land Management will prepare necessary environmental impact evaluations, taking advantage of previously prepared programmatic statements and the thorough environmental analysis and public review specifically afforded by the Bureau of Land Management land use planning system.

The leasing phase of EMARS begins with detailed preplanning of the coordinated mining and rehabilitation factors required for successful rehabilitation and subsequent surface resource management, according to the objectives chosen.

Compliance standards and sample stipulations for each site will be made available well ahead of any scheduled lease sales. The leasing phase concludes with presale evaluations (including preparation of environmental assessments), holding lease sales, postsale evaluations, and lease issuance.

The Geological Survey is beginning efforts to accomplish much of the same task for lands already under lease, so that mining plans can be easily approved where the best quality coal coincides with superior rehabilitation potential, and early warning can be provided as to areas where mining plans may be difficult to approve or require special consideration.

The development of EMARS involves several activities which are presently ongoing or will be initiated shortly. These include:

1. The incorporation into EMARS of data from the northern Great Plains resource study. The primary objective of this study is to provide information and analysis that can be used to place the potential impacts of coal development into perspective on a regional basis and thereby assist the people of the northern Great Plains and the Nation in the management of the natural and the human resources of this region.

Data from this study will be integrated into the first phase of EMARS and will help in establishing leasing goals. In addition, this program will identify additional data needs so that future efforts can be directed to specific problem areas.

2. The preparation of surface and mineral ownership management maps through a coordinated effort of the Bureau of Land Management and Geological Survey. These maps indicate the often complex ownership patterns in western coal areas and are of use to both Government and industry in determining ownership of coal resources.

These should be complete for known coal leasing areas by November or December of 1974. When they are completed, they will enable the Federal Government to determine for the first time definitively how much coal lands it owns and where. This data, coupled with geologic information, will provide us with an inventory of federally owned coal resources.

3. A complete analysis of current leases. A preliminary coal lease analysis has been completed and we are concluding work on a final analysis. This analysis is based on data from each leaseholder regarding its particular leases. And, as an aside, we are willing to talk to this preliminary data today, if you wish.

4. Possible changes in regulations and lease stipulations requiring diligent development and continuous operations on existing and new leases to prevent speculative holdings of coal resources.

We currently are considering the need for new regulations and stipulations which would include increased royalties and rentals to encourage timely development or actual production requirements. We are planning to publish, by September 15, a proposed rulemaking requiring diligent development and continuous production of existing leases.

5. The completion of the final coal programmatic environmental impact statement.

The draft statement is complete and under public review. Five hearings are scheduled for this week and next week in Salt Lake City, Utah; Billings, Mont.; Casper, Wyo.; Denver, Colo.; and Bismarek, N. Dak. to allow the interested public to comment on the environmental impacts of the coal leasing program.

The environmental impacts statement is scheduled for completion by late fall.

In addition, the Bureau of Land Management field offices are identifying possible multiple use and environmental data associated with

potential coal lease tracts. This information will be considered in preparing the public land coal leasing schedule if we determine, after completion of the final programmatic environmental impact statement, that EMARS can be fully implemented without unacceptable environmental impacts.

EMARS, therefore, is a system which allows continuous identification of specific tracts of federally owned coal through the Department's existing multiple use planning system to meet needs for coal reserves. It also allows us to incorporate new information and studies on reclamation, environmental impacts, or coal impacts and to be responsive to new situations such as energy embargoes, whether they occur next week, next year, or in the next decade.

I want again to stress that EMARS is in an evolutionary stage. It is being developed, reviewed, and analyzed within the Department.

I want to reemphasize at this point that EMARS is not an independent project, unrelated to public land management and land use planning.

Rather, EMARS program decisions will be formulated through BLM's formal land use planning system to reconcile resource conflicts, obtain public viewpoints, coordinate related studies and planning efforts, and to produce adequate and timely minimum leasing goals for initial coal leasing schedules in areas where coal can be developed without unacceptable environmental impact.

EMARS would analyze the effect of unplanned patterns of coal ownership, including leases, on future industrial development of rural regions. Large areas have already been leased without regard to the kinds of considerations now generally acknowledged as being essential.

At the same time, it is clear that coal reserves already under lease must play a major part, as soon as safely possible, in providing replacement fuels for petroleum supplies which remain unavailable because of physical or political factors, or unacceptable price levels.

The effect of fragmented patterns of private surface ownership on availability of underlying Federal coal deposits is also being studied.

Regardless of the rate and location of new leasing, baseline studies on rehabilitation potential will continue on lands currently under lease so that review of mining plans and monitoring of rehabilitation compliance will meet the highest standards.

Where possible, all of our efforts are coordinated with other joint efforts by Federal, State, and local government agencies to provide an analytical and informational framework for policy and planning decisions at all levels of government such as the northern Great Plains resource study.

The real key to EMARS is the soundness of its technical input, its resource evaluations, and decisions made at the field level. These are based on BLM's multiple use planning system, just as are other BLM programs, such as timber.

This system contemplates full public participation and affords citizens and local communities opportunity to express their views at public meetings or in direct discussions with BLM managers.

We shall be happy to respond to any questions you may have.

Thank you, Mr. Chairman.

Mr. MELCHER. Well, thank you, George. I think there will be plenty of questions.

But, first of all, you are only addressing yourself, in EMARS, to BLM land.

Mr. TURCOTT. Yes.

Mr. MELCHER. Forest Service is out of it?

Mr. TURCOTT. Well, in the evolutionary stage that the process is in now, we have directed it at only BLM lands. The Forest Service has a somewhat similar land use planning system to BLM's and we feel eventually, if the basic principles of the system are proven and bought off, we are going to have to coordinate with the Forest Service in implementing the same type of process on Forest Service lands.

Mr. MELCHER. Well, the BLM does all of the leasing for Forest Service?

Mr. TURCOTT. Yes, sir, it does.

Mr. MELCHER. And if there is going to be a coordinated leasing program, it would be with the BLM, and probably under EMARS?

Mr. TURCOTT. Yes, sir.

Mr. MELCHER. The fact that the Forest Service is not in your current study and evaluation under the EMARS program, is it related to the fact that under the House-passed strip mining bill, there would not be any mining in the forest, forest lands?

Mr. TURCOTT. No. No, we were not really that deliberate about it. The current leasing analysis that is going on most certainly includes coal, existing coal leases, that are in western national forests.

Mr. MELCHER. Are there any current leases outstanding on national forests?

Mr. TURCOTT. Yes.

Mr. MELCHER. In what areas?

Mr. TURCOTT. There are some in Utah and Colorado.

Mr. MELCHER. Are these relatively—

Mr. TURCOTT. In Montana.

Mr. MELCHER. In Montana?

Mr. TURCOTT. I believe there are some pending applications for leases in the Custer National Forest.

Mr. MELCHER. Where, if I may ask?

Mr. TURCOTT. I may be proven wrong. I sure know in terms of our special kind of pioneer study, the Decker-Birney study, we most certainly took in the Forest Service, and we had very intensive coordination with them on it.

Mr. MELCHER. I understand that, but I was talking about outstanding leases.

Mr. TURCOTT. I will have to check, but I thought there were. There are most certainly leases in nearby Indian reservations.

Mr. MELCHER. Now, George, I wonder if my assessment is fair.

First of all, EMARS is being developed by the BLM, not necessarily to be accepted by the Secretary, but the thought so far in its development is among other things which you have already mentioned, to give a prudent method of offering leases where the coal is, where it meets the market demand, and what conditions will exist that will provide for the rehabilitation of the land after it is mined. Also, is it not timely to say that with the vast potential value of the coal, federally owned, that EMARS is also hopefully designed to not only prevent ripoff of the land where it cannot be reclaimed and be returned to productivity, but it is also designed to prevent a type of

financial ripoff where some people might get the leases. I have in mind that many of these leases, many typical leases, would have 60,000 tons per acre of strippable coal, and that it is worth over \$4 a ton at the mine site. That would be \$250,000 an acre. Fifty such leases around 2,400 acres each comes to \$600 million worth of coal, or potential value of the coal at the mine site. Some leases would have more tons per acre, some less.

So while your testimony does not say that, and nobody that I have talked to concerning EMARS has said so, is it not true that part of the development of this plan is to take into consideration the potential value of the coal in each lease, and to protect the Government and the public in the leasing process?

Mr. TURCOTT. Yes. I think it comes out in several ways, maybe not through EMARS itself. But, as I said in the statement, we most definitely feel that all the rehabilitation costs for any new coal leases, strip mining or underground, must be born by the lessee using strict contemporary standards.

These can be quite expensive. In addition to that, there is the matter of royalties and the escalating rentals.

Mr. MELCHER. You have not touched upon that at all.

Mr. TURCOTT. No.

Mr. MELCHER. But now, about the actual cost for rehabilitation, I have not heard of anyone talking about over \$4,000 an acre. That seems to be about the high point in the discussion on what the rehabilitation costs may be. I think in most instances, the coal companies realistically look at a much less figure to accomplish rehabilitation, no matter whether extended over 5 or 7 or 8 years.

So that is actually a minor item out of the \$250,000 an acre worth of coal extracted.

What do you have in mind for royalties? This is a part of the EMARS study, is it not?

Mr. TURCOTT. No.

Mr. MELCHER. Well then, what, may I ask, do you have in mind for the royalties? What will BLM propose in order to prevent a great bonanza for coal companies or the utility companies that get a lease?

Mr. TURCOTT. I would like Mr. Zimmerman to start off, and he may ask Mr. Ferguson to help. Let us start off with the current situation, where we are under the new lease system that we have reviewed.

Mr. MELCHER. Did you say new leases?

Mr. TURCOTT. Well, these are either new leases or leases we have renewed in the last 2 or 3 years.

Mr. MELCHER. How many have you renewed in the last—

Mr. TURCOTT. Four.

Mr. MELCHER. Four in the last 2 or 3 years?

Mr. TURCOTT. Well, they are either new or renewal leases subsequent to the 20-year renegotiation term.

Mr. MELCHER. First of all, I do not believe you mentioned in your testimony when the moratorium started on new leases.

Mr. TURCOTT. Well, in effect, it started in 1971.

Mr. MELCHER. Yes, in the Spring of 1971.

Mr. TURCOTT. Right.

Mr. MELCHER. And since that time you have had four leases?

Mr. TURCOTT. Yes. Under the short-term criteria announced by the Secretary of Interior.

Mr. MELCHER. And they are for ongoing mining operations, to prevent the closure of a mine? Is that correct?

Mr. TURCOTT. Yes. They were not all new. Now, I do not have the breakdown of the four. I know a couple of them were new ones. I think the other two were extensions, we called them, subsequent to the 20-year period.

Mr. MELCHER. Two of them were in Montana?

Mr. TURCOTT. No, none of them was in Montana.

Mr. MELCHER. Well, what is Western Energy doing there? Did they get a new lease?

Mr. TURCOTT. No. They are filing mining plans on existing leases, that have not reached the 20-year renegotiation period.

Mr. MELCHER. Were the four in Wyoming?

Mr. TURCOTT. No, they were not. One is in Utah, I know, one in Colorado, one is in Oklahoma and the other is either Alabama or Kentucky someplace.

Mr. MELCHER. None in the Fort Union coal mining area?

Mr. TURCOTT. No.

Mr. MELCHER. Go ahead.

Mr. TURCOTT. May we have Mr. Zimmerman discuss royalties?

Mr. MELCHER. Yes. Please.

Mr. ZIMMERMAN. Mr. Chairman, as Mr. Turcott mentioned, we have issued four leases under the new short-term criteria that was announced by the Secretary on February 7, 1973, and we have gone to a percentage royalty, as opposed to a cents per ton.

For example, I will just read briefly from the lease terms. It calls for 6 percent of the gross value of the coal produced, but not less than 17½ cents per ton for the first 10 years, 20 cents per ton for the second 10 years.

Prior to these new leases being issued, everything was based on cents-per-ton royalty, which, of course, did not give the lessor the benefit of any increased value in the coal.

All leases that will be issued now and in the future will be based upon a percentage royalty.

Mr. MELCHER. Well, 6 percent, of course, is quite low. I wonder what the criteria or your thinking is on that?

When you add the 15-cents-per-ton royalty and the coal is worth \$1.75 or \$1.85, that put the royalty close to 10 percent. When you added 17½ cents a ton, that was close to 10 percent. Now the coal has escalated in value rapidly; you go to 6 percent, and even on \$4.25 coal that is about 25 cents per ton. So, you are well below 10 percent.

Oil and gas, I believe, is customarily 12½ percent. The Secretary has no inhibitions or reluctance to put it out for competitive bidding and take bonus bidding. Offshore oil bonuses are fantastically high, compared to what they used to be. And they had the shale oil bonus bidding, and it was 25 or 40 times the amount that BLM had estimated it might be. Or, how many times?

Mr. ZIMMERMAN. 36 times.

Mr. MELCHER. 36 times what the BLM estimated that it might be, or would be likely to be.

Mr. TURCOTT. No, it was not BLM, sir.

Mr. MELCHER. All right. I stand corrected on that. Who was it then?

Mr. TURCOTT. It was just the Department of the Interior, with leadership from the U.S. Geological Survey.

Mr. MELCHER. Was the 6 percent a recommendation of BLM?

Mr. ZIMMERMAN. It is the recommendation of the Geological Survey.

Mr. MELCHER. Would you agree it is quite low, Mr. Zimmerman?

Mr. TURCOTT. Well, I do not—

Mr. ZIMMERMAN. In my personal view, I suppose that 6 percent could be considered to be low. I think we are embarking on a new effort with respect to establishing new royalty provisions, and I would suggest that possibly we need some more experience going into the percentage royalty provisions.

I think it could be argued that 6 percent is low, possibly when you compare it to $12\frac{1}{2}$ or $16\frac{2}{3}$ percent on offshore oil and gas. We have other royalty provisions, most all of them established by statute, with respect to other minerals that are even lower than 6 percent. I think it would be fair to say that maybe the royalty structure should be looked at generally to see what would be a fair and equitable return to the Federal Government.

Mr. STEIGER. Would the Chair yield?

Mr. MELCHER. I yield to the gentleman from Arizona.

Mr. STEIGER. I would like the record somewhere to reflect that when we get into offshore lease and surface mining royalties, we are really mixing apples and oranges. I think for any agency to establish a fixed percentage without taking into account the very realistic requirements to restore the land is going to be irresponsible. If you want to get into Mickey Mouse figures and if you want to compare stumpage on the forest, you have got some stumpage that figures out to over 30 percent of the value of the finished product.

So, I would hope—you are required to administer this and, therefore, your recommendations would be significant—and you would not isolate your judgment based on whether 6 percent, compared to something else, is valid, but whether 6 percent compared to the responsibility of the producer, all of the responsibilities of the producer, are going to involve costs, because in the final analysis, it is not the producer who is going to absorb this, it is going to be the consumer, and we are playing games if we say we have done our part by running it up to 10 or 15 percent and still have the reclamation costs on top of that, because the consumer is going to get that.

And so I am sure that was taken into account, but I just wanted to record to reflect that at this point, and I thank the Chair for yielding.

Mr. MELCHER. I thank the gentleman from Arizona for those very fine comments. We are talking about 60,000 tons per acre, and a conceivable cost of \$3,000 per acre for long term and complete reclamation. That comes to 5 cents a ton, which, figured as a percentage on \$4.25 coal, is about 1 percent. So we are not really getting up very high.

We could use the same argument as the gentleman from Arizona against any royalty to the U.S. Government, if we wanted to hold down on all possible costs to the consumer. But, we are dealing in the marketplace. This is Federal coal and it is going to be in competition in the marketplace with privately owned coal and State-owned coal.

Mr. TURCOTT. Could I volunteer something, sir?

Mr. MELCHER. Yes, sir.

Mr. TURCOTT. Well, I certainly subscribe to Dale's thought. I think

there is one thing we have got to keep in mind. We are just talking about four leases here. Raising the royalties this high took some intestinal fortitude.

We have offered two or three other leases that have gone no-bid after the applicant wanted it under the short-term criteria. Keep in mind that the statutory royalty on coal in the 1920 Mineral Leasing Act is 5 cents per ton, not 5 percent. Five cents. The Congress established some kind of an incentive with that low royalty many years ago, in the 1920's, and that is, discretionary, that is it is just the minimum; for the Secretary to have higher royalty than that. There is some kind of a statutory history there.

Mr. MELCHER. Well, of course, these are just minimums. We understand that.

Mr. TURCOTT. Certainly they are.

Mr. MELCHER. But the provisions of law will also permit the Secretary to have competitive bidding.

Mr. TURCOTT. Right. I will say that we are looking very closely at royalty rates under the work that Mr. Ferguson and others are doing on the diligent development regulations, as we call them, and we are not asleep on this royalty question.

Mr. MELCHER. Let the record show that the last royalty bidding on Federal coal leases prior to the moratorium on new leasing, the high was \$500 and 5 cents per acre. Am I correct, Mr. Zimmerman?

Mr. ZIMMERMAN. Yes, that is correct.

Mr. MELCHER. That probably involved coal of 60,000 to 80,000 tons per acre. So, the royalty bidding prior to the time of the moratorium was very low. Conceivably, it would be much higher at this time.

I have wondered whether recent newspaper accounts of an alleged memorandum in the Bureau of Land Management concerning 200 million tons of coal in the Birney-Decker area that would be offered for leasing have come to your attention?

Mr. TURCOTT. Yes, sir, it has. It came last Friday, and if I have ever been upset it was this time. I want to tell you about this.

The material must have come from a memorandum that was sent up to me and other policy level people. It was never signed, it was never dated, it was never issued.

Mr. MELCHER. First of all, by being sent up, what do you mean?

Mr. TURCOTT. It was sent up by staffers in the BLM as a possible approach to an accelerated implementation of EMARS as a result of some initial EMARS studies we had done. It was purely speculative and suggestive, because we have to keep in mind that many months ago, when this occurred, this country was in the throes of and at the peak of, emotional concern about the energy crisis. Some of that has disappeared, but whether the basic problem has disappeared or not is conjectural.

These staff people were merely sending something up to me to see if I wanted to bring this up to the Director and on up into the Department as something to do. This material sat in my desk in a locked drawer for many days, because I knew of its sensitivity. After 2 or 3 weeks I was able to arrange meetings with departmental officials, with OMB officials, with FEO officials. It was the considered judgment of higher policy officials that we were going to approach EMARS with all deliberate speed and we were not going to rush out with anything like this.

The only thing I can say is that I wish the newspapers would validate their information before they put it out. It would be no more, than if some young editorial writing staffer were to send a proposed editorial to his editor and it was turned down, and it was put out by the competing newspapers as the official editorial line of the first newspaper. That is how much weight that has.

But, it has caused a lot of consternation and I am very concerned about it. I cannot prevent the leaks in the Bureau. This is just the way it works. But, I am concerned over and above that, that the newspaper did not validate it as an official document.

Mr. MELCHER. Well, when you received this suggestion from staffers, when was it, George, last fall or early this year, or when?

Mr. TURCOTT. No. It was either just before the end of the year holidays or just after.

Mr. MELCHER. That would be right around the first of the year. And you in effect shut the drawer on it, is that it?

Mr. TURCOTT. Right. I could not go out with anything like that.

Mr. MELCHER. Go out? If I follow you correctly, you mean going out to the area?

Mr. TURCOTT. Sign it and make it an official document and send it out.

Mr. MELCHER. To the area director?

Mr. TURCOTT. To the State directors of these six or seven major coal leasing States.

Mr. MELCHER. Well, early this year, I asked for information on EMARS. I was provided a briefing on it, and I believe a rather thorough discussion, and I think Mr. May was one of the persons at that briefing who I see is in the audience right now, and at that time, you had already put the "kibosh" on it, is that right?

This is in my backyard, and I have a profound interest in it.

Mr. TURCOTT. That was early spring, was it not?

Mr. MELCHER. Yes, at the time in February or March, when I had a briefing on EMARS. I believe it was March and you had already vetoed, in effect, this proposal.

Mr. TURCOTT. Yes, because as soon as I went to the departmental officials and explained to them in detail, somewhat the same detail you received, what the EMARS process was, all the sensitivities involved, the fact that the EMARS process is the "described action" in the coal programmatic EIS statement, it was a very telling item for decision. Because, if I put it out as a kind of preliminary run on EMARS, and here we were saying EMARS was the "described action" in a coal leasing programmatic statement, that is kind of contradictory. There were all kinds of reasons. It was an effort by some, to assure that if there were such an emergency, that the Bureau could move quickly on coal leasing.

Here were some possible leasing targets, target goals and that is all it was.

Mr. MELCHER. All right now, this brings up two other points relevant to this, very relevant to it.

How much impact is the Federal Energy Office and the Federal Energy Administration going to have in developing policy for EMARS?

Mr. TURCOTT. Well, in terms of final, total Department of the Interior leasing goals, if any, that any new leasing goals, the Federal

Energy Agency will have considerable say, because when and if the Secretary decides to fully implement the EMARS process and the information comes back up through it, as shown in the diagrammatic charts, it will be reviewed in OMB and in the Office of the President, and there will be FEA people involved.

Mr. MELCHER. Who is going to make the final decision?

Mr. TURCOTT. Sir?

Mr. MELCHER. Who will make the final decisions?

Mr. TURCOTT. In name the Secretary will probably make the final decision, but it will be a joint decision between OMB, FEA, and the highest levels of the Department of the Interior.

Mr. MELCHER. Is OMB supposed to be speaking for the President, or how do they fit into it?

Mr. TURCOTT. I would say they would, sir.

Now, in addition to that, there is some interface with a project called Project Independence, being more or less chaired and monitored by FEA. Some of the materials that we have, especially from our coal lease analysis, and some of the things we might do under EMARS are being fed into that as input to the Project Independence blueprint studies.

Mr. MELCHER. I want to return a little bit later to this same point, but before we do, I think I have a related question that fits in here better rather than later.

That is this point: There are 533 outstanding coal leases, Federal coal leases at present, scattered through 15 States. Most of the work that you have done on EMARS has devoted attention or directed attention to the Fort Union coal deposit, which is Montana, Wyoming, and the Dakotas.

Mr. TURCOTT. Well, yes. That deposit in substantial measure, but also the deposits in Utah, Colorado, and New Mexico.

Mr. MELCHER. Utah?

Mr. TURCOTT. Which are not Fort Union.

Mr. MELCHER. No, they are not Fort Union, but EMARS is also looking at Colorado, Utah, and New Mexico?

Mr. TURCOTT. Yes, sir.

Mr. MELCHER. All right. Since my State, according to the USGS definite definition of strippable coal, has about 20 percent of the total reserves of the United States, and it would be a little more than 20 percent, what develops in EMARS is of great significance to me. I have some concern, and I think that others from other States will have some concern, on what the status of the outstanding leases will be.

I, for one, would want outstanding leases to be evaluated in the EMARS process. In your testimony you say that there will be a detailed and indepth analysis of current leases.

That really does not tell us very much. You can study them to death, you can analyze them to death. But the question is, will they be put right there into the EMARS system. In other words, if EMARS is successful, we will say we are going to mine coal right here because it is in the national interest, we can reclaim the land, and the social impact on the area is not too great, and so on.

Speaking for myself alone, but I would judge also for others where there are a lot of outstanding leases, we are very anxious to know

whether it is truly going to be the policy of the administration to fit those outstanding leases into the EMARS system?

Mr. TURCOTT. Yes, very. Very definitely we will.

Mr. MELCHER. All right then, I want your answer to this question. I am delighted to hear you say that, but what about the claim of those people who have been paying 50 cents an acre to hold those leases, and may have paid a bonus for them and even though they are relatively small amounts, that they have a property right in these leases and the right to develop these leases, and to mine the coal without further conditions.

How do you prevent that? Under EMARS, you would not necessarily permit them to mine the coal even though they had a lease?

Mr. TURCOTT. It would not be under EMARS.

Mr. MELCHER. Would not be under EMARS? What would it be under?

Mr. TURCOTT. Well, it would be under any outstanding regulations we now have, or any modified regulations that we are contemplating.

As I said, we do propose to issue proposed rulemaking September 15, which will get at your question in part at least.

I wonder sir, I do not know how much time you have this morning, and I do not want to organize your hearing, of course, but if I could have Mr. Patton go through the preliminary existing coal lease analysis we have, and I emphasize the word preliminary, because it is not completed to show you some of the rather startling things that have come out—and following that have Mr. Ferguson discuss the major components of what he, with his legal training thinks might be the major components of proposed rulemaking on diligent development of existing leases, that might help with this major point.

Mr. STEIGER. Mr. Chairman?

Mr. MELCHER. The gentleman from Arizona.

Mr. STEIGER. I, for one, Mr. Chairman, would hope we can do this, and I gather from Mr. Turcott's remarks that either one or the other of these gentlemen, probably Mr. Ferguson, will address himself to the likelihood that there will be a requirement of existing lease holders possibly to mine more as opposed to less, and you are going to talk about the consideration of reserves on existing leases?

Mr. TURCOTT. Yes.

Mr. STEIGER. Mr. Chairman, I think that would be very useful.

Mr. MELCHER. Yes. With your suggestion we will permit that in just a moment or two.

Do I understand your answer about bringing these outstanding leases under EMARS to mean that there may be denials of the right of the lessee to develop his mine, to mine the coal, even though he has a lease?

Mr. TURCOTT. Well, it would not be under EMARS, again, sir. I can see situations, and it has occurred, where there has been no mining development on one of these smaller leases, where the coal is very deep, where it is in a very fragile area with respect to environmental considerations, and low capability for rehabilitation, wherein a mining plan might be filed with U.S. Geological Survey for development. In this latter day we might come down with a view that any kind of economic mining in terms of these other situations is just prohibitive.

Mr. MELCHER. Well, I can understand that. I am wondering under

EMARS where you determine that it is not in the best interests to mine some Federal coal for a number of reasons, whether you would apply that same criteria to outstanding leases, many of which may have been granted wherever somebody had a desire to lease some land without regard to any criteria.

Mr. TURCOTT. Pretty much of the same basic environmental rehabilitation criteria would be applied, but what we do in terms of a current lease will be on a case-by-case basis.

Mr. MELCHER. Then the answer to my question as to whether or not you will deny the authority to mine, or turn down a plan and therefore deny any mining to an outstanding lease holder, will be on the basis of certain criteria such as land reclamation?

Mr. TURCOTT. Environmental considerations.

Mr. MELCHER. Which could also be in addition to land reclamation, including water damage?

Mr. TURCOTT. It most certainly will be those things. There might be other criteria. What about transportation? What about impact on any surrounding community? The secondary effects. There could be all kinds of things that would go into a decision on the details of any mining plan that might be required.

Mr. MELCHER. Well, I think also implied in your answer is that whatever criteria are established in the strip-mining reclamation bill as finally enacted by Congress, those criteria automatically apply.

Mr. TURCOTT. I was wondering when that would come up. I think that overrides everything we say here today.

Mr. MELCHER. That really will govern what Federal coal is going to be mined?

Mr. TURCOTT. Whatever happens to the legislation that is to be heard tomorrow in front of Mrs. Mink and has already passed the Senate has a bearing too.

Mr. MELCHER. George, you are very familiar with the Mansfield amendment, because it applies to federally owned coal.

Mr. TURCOTT. Yes.

Mr. MELCHER. Do you feel that under EMARS you are going part way in answering the concern of Senator Mansfield and other Senators who are very much cognizant that development, large development of federally owned coal in Montana, and Wyoming and other States might cause more impact and damage than could be absorbed and would be prudent?

Mr. TURCOTT. Yes, we do. I believe—

Mr. MELCHER. Is EMARS—

Mr. TURCOTT. I believe in terms of the degree of discretion preciseness, as I say, deliberate speed, the process where actual leasing goes down to site selection, will be reviewed at the highest executive levels of the Department.

I honestly think that this is a process of trying to get informed judgment, that it will do a great deal to alleviate the concerns of the Senator and others.

Mr. MELCHER. I have one other question before we bring up the other gentlemen, and that is what conditions in the West you believe EMARS will consider in their process of approving new Federal coal leases? How will you take water into consideration? For instance,

if a lease of 2,400 acres, involving 600 million tons of coal were predicated on the idea of building a coal gasification plant which requires huge amounts of coal, will the EMARS process require information on the purpose of the coal lease? Will you look behind the application to the use for the coal, or the purpose?

Mr. TURCOTT. Certainly that will have to be a very fundamental part, and probably require some detail in describing why the applicant or lessee wants the coal.

Mr. MELCHER. And will that come at the stage of the lease application? For instance, you have competitive bidding. Let us review this.

You have a competitive bidding situation, and you have a number of applicants. At what stage do you review what you are going to use the coal for?

Mr. TURCOTT. We review it long before we ever get to the point that we are advertising and going into a competitive bidding situation. This plugs right into the early stage of running any one application or geographic site area through the EMARS process and the Bureau's planning system as to determine whether there is water or not, or whether applicant or applicants have shown specifically that they have water that they can use, or where they are going to get it, or whether they, indeed, even need water or not. Perhaps they only need minimal amounts, because they may be going to transport the coal out of the region to other areas needing low sulphur coal.

That will be particularly pertinent in the early stages of any coal leasing in the northern Great Plains.

Mr. MELCHER. You have mentioned that transportation would be a factor.

Mr. TURCOTT. Right.

Mr. MELCHER. And now it is fair to conclude that water will also be a factor which would affect the capability of the lease applicant to utilize the coal that he is asking for?

Mr. TURCOTT. Yes.

Mr. MELCHER. That is reassuring.

Now, I think we ought to follow the suggestion of the gentleman from Arizona and hear Mr. Ferguson. Is that right?

Mr. TURCOTT. I believe in sequence it would be better if we could go through the preliminary existing coal lease analysis with Mr. Patton first.

Mr. MELCHER. Mr. Patton.

Mr. TURCOTT. Mr. Patton first, and then Mr. Ferguson.

Mr. MELCHER. All right. Proceed.

Mr. PATTON. The Bureau of Land Management and the Geological Survey undertook to analyze the existing coal leases that we have in the six States of Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming to take a look at the amount of resources that were in these leases, what the commitments were, what the production was, and to determine where we stood on those leases. The analysis is still under way.

We are still looking very hard at the figures in this analysis, but we are beginning to get a feel for the results of the analysis.

[The document entitled "Summary of Analysis of Existing Coal Leases in the Six Major Coal Leasing States" follows:]

Preliminary—Summary of analysis of existing coal leases in the six major coal leasing States, (Colorado, Montana, New Mexico, North Dakota, Utah, Wyoming)

(1) Total number leases.....	462
(2) Total acres.....	681,180
(3) Total recoverable reserves (billion tons).....	16.1
Uneconomic reserves (billion tons).....	.55
Environmentally unacceptable reserves (billion tons).....	2.01
Committed reserves (billion tons).....	6.68
(4) Uncommitted minable reserves (billion tons).....	6.87
Reserves in area less than LMU's (billion tons).....	1.14
Reserves in LMU's (billion tons).....	5.73
Reserves which can be expected to be developed under existing conditions (billion tons).....	1.72
(5) Range of reserves available to meet emerging needs.....	1.72-5.73
(6) Equivalent additional annual production (million tons).....	28.60-95.56
(7) Estimated Regional Demand:	
1980 (million tons).....	141.2
1985 (million tons).....	217.5

Analysis of Leases

Total recoverable reserves under lease (16.1 billion tons) :	<i>In millions of tons</i>
New Mexico.....	335
North Dakota.....	268
Colorado.....	1,650
Montana.....	1,181
Utah.....	3,604
Wyoming.....	9,065

Total—(committed + uneconomic + env. unacceptable)—uncommitted 16.1—(6.85 + .66 + 2.01) = 6.87 (billion tons)

I. NO ACTION

	Total uncommitted (million tons)	Total uncommitted (million tons)	Could support annual production
New Mexico.....	202	50	0.83
North Dakota.....	94	23	0.38
Colorado.....	207	52	0.86
Montana.....	479	120	2.00
Utah.....	1,355	339	5.65
Wyoming.....	4,528	1,132	18.86
Total.....	6,870	1,716	28.60

II. DILLIGENCE REQUIREMENTS (ASSUMES ALL LMU'S WOULD RESPOND)

	LMU's uncommitted	Annual production
New Mexico.....	165.9	2.76
North Dakota.....	84.7	1.40
Colorado.....	222.6	3.70
Montana.....	409.0	6.80
Utah.....	1,007.0	16.80
Wyoming.....	3,844.1	64.00
Total.....	5,733.0	95.56

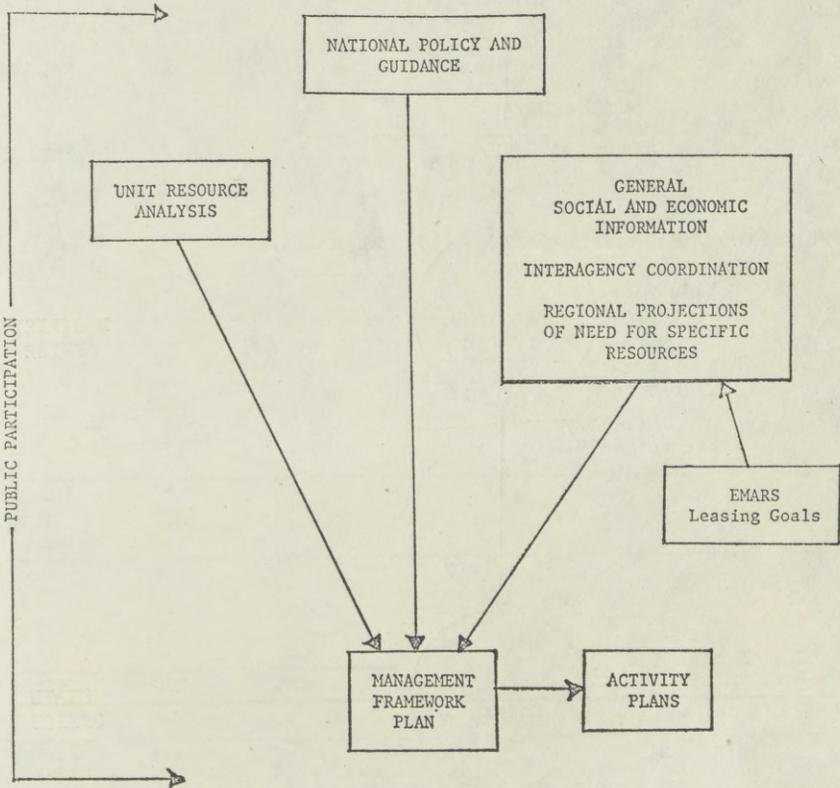
CONCLUSIONS

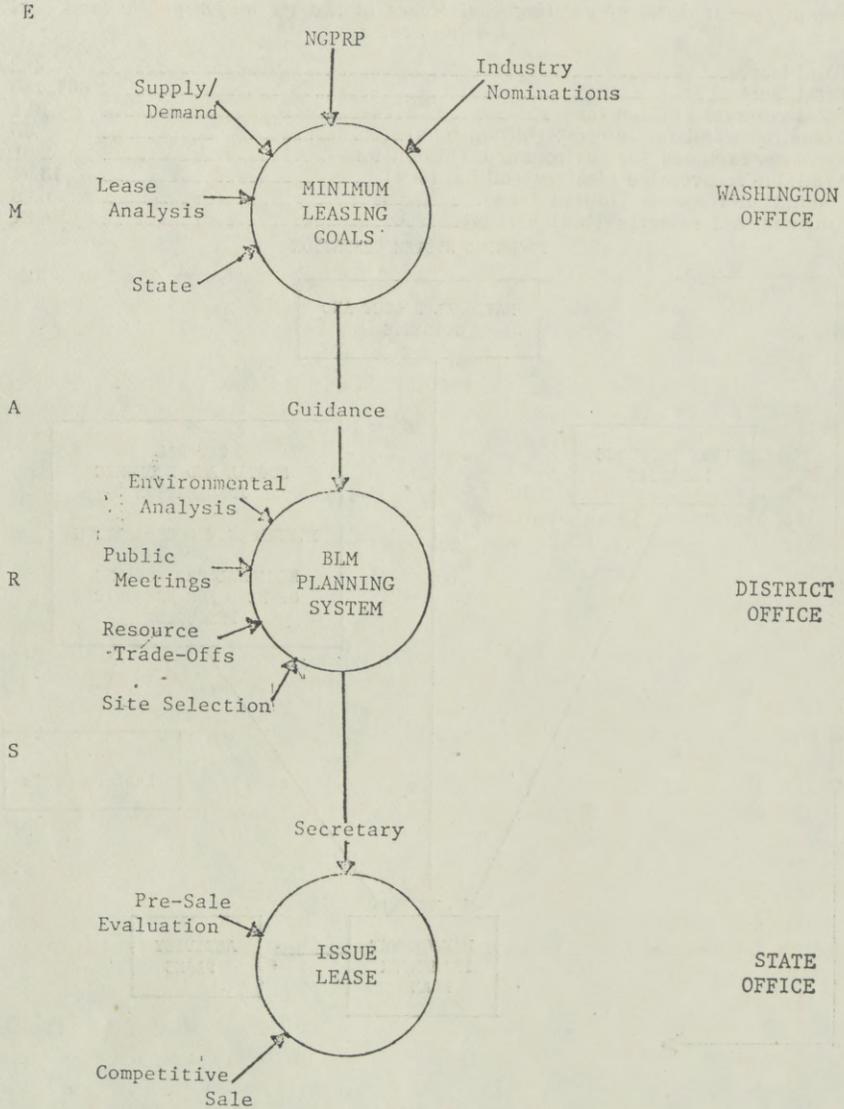
	Production supportable under existing leases (uncommitted available)	Dilligence requirements (assumes all LMU's produced)	Coal demand		
			1973	1980 (projected)	1985 (projected)
New Mexico.....	0.83	2.76	0.25	3.5	4.7
North Dakota.....	.38	1.40	1.5	6.3	27.4
Colorado.....	.86	3.70	1.7	21.6	2.0
Montana.....	2.00	6.80	1.9	24.6	47.2
Utah.....	5.65	16.80	2.4	20.2	21.7
Wyoming.....	18.86	64.00	5.0	65.0	84.5
Total.....	28.60	95.56	12.75	141.2	217.5

Summary—Analysis of existing coal leases in the six major public land coal leasing States

Total leases.....	462
Total acres.....	681,180
Total reserves (billion tons).....	16.1
Areas too small for interest (billion tons).....	.55
Reserves excluded for environment (billion tons).....	2.01
Available recoverable reserves (billion tons).....	13.54
Committed reserves (billion tons).....	6.68
Uncommitted reserves (billion tons).....	6.87

PLANNING SYSTEM OPERATION





Objective—Develop a leasing and development strategy for the coal resources on the National Resource Lands:

Issue Northern Great Plains Report (8-74).

Analysis of existing coal leases (9-74).

Complete analysis of ways to require early production from existing leases (8-74).

Proposed regulations for diligent development of existing coal leases (9-15-74).

Final EIS Coal Programmatic (11-74).

Project Independence—Blueprint Report (11-74).

Industry nominations (12-74).

Minerals Ownership Maps (6-75).

Announce coal leasing program strategy (2-75).

Begin implementing coal lease strategy (3-75).

Uncommitted reserves

Reserves in LMU's (billion tons)-----	5.73
Reserves expected to be developed in response to increased demands (billion tons)-----	1.72
Range of reserves available to meet emerging needs (billion tons)-----	1.72-5.73
Equivalent annual production (million tons)-----	28.60-95.57
Projected demand for (million tons)-----	1980-141.2
Federal coal (million tons)-----	1985-217.5

Mr. PATTON. There were 462 leases examined. Those involved 681,180 acres, with reserves of 16.1 billion tons.

Now, within that 16.1 billion tons, there were 0.55 billion tons, almost 600 million tons, which were uneconomic to mine, either because they are very small or because the quality of the coal is too thin, or the over-burden is too deep.

And then we estimate that there is about 2 billion tons, 2.01 billion tons, which for environmental reasons probably would not be mined.

Mr. MELCHER. I want to be sure, Mr. Patton, that we understood you right. You said 2.01 billion?

Mr. PATTON. That is right.

Mr. MELCHER. Thank you.

Mr. TURCOTT. Mr. Chairman, we will give this material to you in a letter size form.

Mr. MELCHER. Thank you.

Mr. PATTON. We then come down to available recoverable reserves in these 462 leases of 13.54 billion tons. Of that we find that 6.68 billion tons are committed. By that we mean, there is either active mining on these leases, or there are contracts for these leases and this is the annual production which would be involved, plus the reserve to support that production.

Mr. MELCHER. What do you mean by a contract?

Mr. PATTON. Where the lessee has an actual commitment to deliver coal at some point to a user.

Mr. MELCHER. But not necessarily mining?

Mr. PATTON. It is not being mined now, necessarily.

Mr. MELCHER. Would it involve circumstances where there is a substantial lease but there is no mining, where there is no current mining by that company at all?

Mr. PATTON. I presume that it could, but if it did, it would indicate that the company does have commitments to begin production from that lease or from the unit that that lease is a part of.

Mr. MELCHER. Thank you.

Mr. PATTON. We then have 6.87 billion tons within those leases that are uncommitted. Now, within that 6.87 billion tons, we have 5.73 billion tons which are in what we call a logical management unit, a unit large enough to permit economic and efficient mining.

We estimate that within that uncommitted figure that approximately 1.72 billion tons would come into production in the future to meet rising demand in the future. So between the 1.72 billion tons which we believe would come into production and would be committed to existing or to rising demands, and the 5.73 billion tons within the logical management units, we believe that this range is what we can expect from the uncommitted reserves on these existing leases in the future, this at the lower level.

If we should bring diligence requirements to bear, somewhere up

toward this. We do not think we can get that high, but it would be in the range.

Now, having said that, we then can say that this range would give us 28.60 to 95.57 million tons in annual production. And looking toward an estimated demand in the area that the public land coal resources reserve of 141.2 million tons in 1980 and 217.5 million tons in 1985, indicates to us, at least on the first analysis, that new leases will be necessary.

Mr. MELCHER. Well, Mr. Patton, whatever these figures are, projected demand for Federal coal, and whatever will be the development on any lease, those are just figures. It is a whole new ball game now, is it not, with the imminent passage of the strip mining reclamation bill because they are going to establish, if that bill follows pretty much the way the House passed it, and the President signs it into law, some of the leases that are outstanding would not be available to be developed at all, because they would not conform with the requirements of the bill, is that not true?

Mr. TURCOTT. Yes, sir, Mr. Chairman. That is why I have emphasized through voice inflection so hard here that this is preliminary. And why I also said a caveat over everything we say is the surface mining and reclamation bill and possibly the bill S. 3528 that will be heard tomorrow, as passed by the Senate.

Mr. MELCHER. The whole attitude of Interior and the Federal Energy Administration and, if you will, the Office of Management and Budget, as to the development in Federal coal is going to be governed by the terms of that bill, is that not true? So we are going to have a complete revision of everything we have been looking at in terms of outstanding leases or future leases, is that not true?

Mr. TURCOTT. I would say in terms of my review over the weekend of the House-passed version, which was its version of the Senate bill, that it will have a very strong impact, and that we are just going to have to wait and see.

There is one thing, though, and perhaps again I am volunteering too much, but I think this is very significant here, I have been asked by OMB officials and FEA officials, well, just in conjecture, pure, sheer conjecture, if we somehow or another were to accelerate new coal leasing and to find ways and means to try to accelerate development, and then what we hope to get in terms of our diligent development regulations, given any new legislation, whether western coal would have a really substantial impact on relieving in whole or in part the energy shortage. Even with its attribute usually of low sulfur and low ash content, significant impact is some years off.

It takes 5 years now to get one of those huge drag lines, if we are talking about strip mining. There are all kinds of problems, depending upon what kind of coal development it is.

Sometimes even getting the materials or railroad tracks, or if it is mine mouth facilities for power transmission, or if it is coal slurry, getting the pipelines, the pipe to transport the coal, it is a problem that boggles the mind when you look at it in terms of the material allocations, along with OCS and Alaskan developments and so forth.

So, whatever happens, no one should leave this room feeling that even though we can do this, given any new legislation, that there is going to be an immediate alleviation of some of the energy problems from western coal.

Mr. MELCHER. Thank you, George.

Now, is it time for Mr. Ferguson?

Mr. TURCOTT. Yes, sir.

Mr. FERGUSON. Well, we have been concerned with what we can do about both existing leases and new leases as far as requiring additional development. As you probably know, under the present statute, any existing lease comes up for readjustment of terms every 20 years and at that time the Secretary could impose new conditions on an old lease.

The question, a very pressing question, has been, can we require any additional diligent development of an existing lessee, the holder of an existing lease, until that 20-year period comes around. Now, we have worked out what we think would be helpful. These changes are in contemplation. Let us say we are in the course of the preparing changes in the lease form which we think would be helpful for future leases, and we rely, to a large extent, on the payment of cumulative advance royalties there. We cannot change the royalty provisions of an existing lease. Those are written into the lease form, and I would see some difficulty in changing that.

On the other hand, when it comes to diligence, what I am talking about now is about the 1967 form, and I think that generally that form was used for most of the existing leases. That requires a lessee to show reasonable diligence in the development of his lease. This provision is based on a requirement in the statute that the leases be on condition of diligent development and continuous operation of the mine or mines.

Although the statute thus requires us to issue the lease on the basis of diligent development, all we have ever done in the past in the lease form is to put in this requirement that the lessee shall show reasonable diligence.

However, I do think that we could now issue new regulations with a definition of diligence which would require a lessee to undertake certain actions. In this connection, I should point out that the lease was issued "subject to the terms and conditions of the Mineral Leasing Act * * * and to all reasonable regulations of the Secretary of the Interior now or hereafter in force, which are made a part hereof."

In other words, when we issued the lease, we carefully provided that the regulations might be amended from time to time, and that those amended regulations would be applicable to the lease.

It is on this basis that we think that we could now write a definition of diligent development which would require the lessee to undertake certain actions. A key to all of this is the logical mining unit, and, if we do issue regulations, it seems to us quite likely that we will start with a definition of logical mining unit. This is the definition we are considering right now.

This is by no means a final decision. But, what we are considering is a logical mining unit. This would mean a mining unit established by or approved by the mining supervisor as a unit of land within a compact area that can be developed in an efficient, economically and orderly manner, and that will result in conservation of coal reserves; or, lands committed to a contract for collective prospecting, development or operations approved by the Secretary pursuant to 30 U.S.C. 201-1.

This unit may consist of one or more Federal leases and may include intervening or adjacent private or State lands, insofar as all lands are under the effective control of a single operator.

We start with this definition of the logical mining unit, because it is recognized that some of these mines are extremely large and go far beyond an individual Federal lease, and that we would not feel it necessary that the diligent development be on each particular Federal lease, as long as it is somewhere on the logical mining unit of which the lease is a part of.

Now, for diligent development, we considered something like this, that diligent development means preparing to extract and extracting coal from the leased lands, or if the lease is included in the logical mining unit, from that LMU, in a manner which will promptly lead to the greatest ultimate recovery of coal consistent with the necessary protection of other resources, pursuant to a plan of operations approved by the mining supervisor.

Now, we then are faced with the question of what kind of operations could be considered diligent development. We have thought that we would include actual mining operations, but also include environmental studies, on-the-ground geological studies, engineering feasibility studies, mining method and survey studies, research on mining methods, and so forth, and any development and construction work necessary to bring into production the lease or logical mining unit of which the lease is a part.

Now, we have thought about that. We also realize that if we consider things like that to be forms of diligent development, we might have to put some restrictions on how much can be considered diligent development. That is, we cannot allow a person, it seems to me, to engage in indefinite geological studies and say he is doing diligent development. We would have to put some time restrictions on that, and also we realize that there should probably be some time limitation on the submission of this plan of operation for diligent development. That is, it should be submitted within a period of years.

These are some of the things that we are considering that we can do with existing leases.

Mr. MELCHER. Mr. Ferguson, I was wondering about this term you used, advanced royalties. I do not understand that.

Mr. FERGUSON. Well, this is a proposal that we have considered only for future leases, the ones that we have not issued. We have put it in four leases. I mean, but it is not something we can generally apply to leases which were not issued containing this provision.

But, we do have it in the leases that have been issued during the last year or two and it has been worked out through the Geological Survey. This is a requirement that the lessee will pay an annual advance royalty upon a certain number of tons, which will vary from lease to lease, for the 6th through the 10th year, at a certain rate of so many cents per ton, and then at another rate of so many tons per year for the 11th through the 15th, and again for the 16th through the 20th year, and there would be specified royalty rates.

So, the lessee would always, whether he was mining or not, be paying us an advance royalty against which he could credit royalties when they fell due on actual production.

Mr. MELCHER. So—pardon me, did I interrupt you?

Mr. FERGUSON. No, I just wanted to say, therefore, it is looked upon as an incentive to him, because he is going to pay the royalty anyway.

Mr. MELCHER. Okay. What you are attempting to do, and it is part

of the EMARS program, as I understand it, is to make certain that a lease is not just held for speculative purposes? Is that correct?

Mr. FERGUSON. I think we have thought that was a major flaw for many years, that some of these leases——

Mr. MELCHER. You have thought that that was a major flaw in some of the leases?

Mr. TURCOTT. Well, I will answer your question, sir. Yes.

Mr. MELCHER. Because for a very nominal sum of money, a lessee could have a lease that is great in value or potential value of coal, and with no real intention of development?

Mr. TURCOTT. Yes, sir.

Mr. MELCHER. And then sell the lease at a higher price to somebody else or sign an agreement of some type?

Mr. TURCOTT. I would not go into anyone's motives. But, the point being, what we are doing here, both with this coal analysis and with the lease, the main features of what Mr. Ferguson has read of what we hope will be in the proposed rules is to examine again these leases on a case-by-case basis, giving prudent flexibility to the lessee, but that he just cannot sit on it.

Mr. MELCHER. Well, then, this is part——

Mr. TURCOTT. Unless there is some feature in terms of that roughly 600 million tons where even we feel it is uneconomic, or for some other reason it is not feasible to develop.

Mr. MELCHER. So this is part of helping to prevent in the future a ripoff in obtaining the Federal coal leases?

Mr. TURCOTT. I do not know whether Mr. Ferguson or maybe you are coming to it, but I intend to jump ahead of you. Even with the flexibility and the prudent restrictions that we should give any lessee in the private industrial world, it does read that upon failure to comply with such things, that the lease could be subject to cancellation.

Mr. MELCHER. Would be subject to cancellation?

Mr. FERGUSON. Yes. You see, the lessee is required to comply with all of the terms and conditions of the lease and regulations, and failure to do so renders it subject to cancellation.

Mr. MELCHER. And this is something that does not exist in the current regulation or leases?

Mr. FERGUSON. Well, we do not have a definition of diligence.

Mr. MELCHER. We have the term. We do not have anything to——

Mr. FERGUSON. No, we say he is to exercise a reasonable diligence, skill, and so forth.

Mr. MELCHER. So, you are not able to enforce it because of that?

Mr. FERGUSON. It would be not easy, no.

Mr. MELCHER. Pardon me?

Mr. TURCOTT. Go ahead and tell him the other part, that as a practice we have let them pay advance royalties.

Mr. FERGUSON. Now, we have also allowed lessees to pay certain advanced royalties in lieu of continuous operation. The statute, as I have said earlier, requires that the lease be on condition of diligent development and continuous operation.

Then the statute says that the Secretary may, if it is in his judgment desirable, allow a payment of an advance royalty, which is a very small advance royalty, in lieu of continuous operation. And our leases have certain language in them which could be interpreted as an exercise of

that discretion to allow the payment of an annual advance royalty in lieu of continued advance operation.

However, there is nothing in the lease or statute to say that there can be the payment of this small advance royalty in lieu of diligent development and, therefore, I stress the fact that we can impose, by regulation, a definition of diligent development which would be effective.

Mr. MELCHER. Thank you very much.

The gentleman from Arizona.

Mr. STEIGER. No questions.

Mr. MELCHER. Does staff have any questions?

Mr. SHAFER. I do not think so at this time, Mr. Chairman.

Mr. MELCHER. I do not think I have any more questions. I appreciate your coming here today. I notice in my notes that I do have one more question.

I guess I should direct it to you, George. You refer in your testimony to multiple use. Is that implying that at times you would find a higher and better use than coal mining and, therefore, would have to deny some leases or prevent some leases from being applied?

Mr. TURCOTT. Yes, sir.

Mr. MELCHER. And that could be agricultural uses, or recreational uses, or what?

Mr. TURCOTT. It could be any one or any combination of uses. For instance, obviously the most pertinent ones that come to mind are areas where the watershed is made up of very fragile, highly erosive and maybe soils in an active state of geological erosion, where we would just say "no disturbance in that area." Just as with water there should be every protection. We can see it in terms of recreational areas and in terms of wildlife habitat areas or any combinations of these. We would be looking at other areas that do not have these problems or constraints to do any coal leasing.

Mr. MELCHER. Well then, I do get back to the same point, I guess. Would you impose that on outstanding leases also?

Mr. TURCOTT. I feel that in terms of outstanding leases wherein a new, brand new, or a modified mining plan were to be submitted to the U.S. Geological Survey, if such factors were really to come up as overwhelming conflicts, we might have to have an environmental impact statement itself on the mining plan, as we are doing in several cases now in the West.

And we might recommend that such a mining plan not be brought into bearing, unless it could be modified somewhere, but if such is the case, then, of course, the Government is faced with probably a damage situation with respect to not allowing full development of the lease.

Mr. MELCHER. And that would be a problem for the Justice Department to handle?

Mr. TURCOTT. Well, sometimes it might be a court case, or it might be legislation, or it might be any number of things.

Mr. MELCHER. We will be interested in what you have in legislation along that line, but I would suppose it would be legislation that would authorize the repayment for the investment in the lease and the damages that a company might incur because it could not develop the lease, is that it?

Mr. TURCOTT. Well, this is all conjectural and it is very legalistic and I am not an attorney. But, we are more and more being faced with

this same problem, not only with coal, but with phosphate, oil and gas, and so forth, especially on national forests.

Mr. MELCHER. I see.

The gentleman from Arizona.

Mr. STEIGER. Thank you, Mr. Chairman.

I doubt, Mr. Turcott and company, that you ever come up here and actually learn something, because we are always learning from you here in the process.

Mr. TURCOTT. Oh, I learn.

Mr. STEIGER. But there is a situation that I am convinced nobody in the Interior is aware of, and I know this committee is not, and it is the kind of thing that really spooks me because I know it is impossible to stay abreast of all the technological advances. I think somebody should take it upon themselves to advise himself of the efficacy of drip irrigation.

Now, drip irrigation is a science which has been developed to its highest degree or state in the country of Israel. But, I just learned here 2 weeks ago, and Mr. Chairman, you might be interested in this, and the reason you have got to take it into consideration because every one of the factors you are considering is the adaptability of the areas to reclamation when you designate them, and well, outside of Tucson, on a mine known as San Xavier, there is a mine dump. It is a deep mine, it is an open pit copper mine. But, they have got about a 60° slope, and so the soil contains all of the acids that you find in a coal overburden and a good deal more, because it was the material from the mill, a 60° slope, and of course, completely arid, and would not be supportable of any vegetation normally.

On this slope they are raising every vegetable known to man as a result of drip irrigation, because what happens is that—I mean literally everyone, everyone that will grow in that climate. No trees, but all of the typical garden vegetables.

I don't want to bore you with a recitation of it, but all of them. It is very simple as to why it works. This drip irrigation, through drip irrigation, you are able to furnish all of the necessary nutrients in the form of soluble fertilizers in the water itself. The drip irrigation process concentrates the water at the root of the plant. It washes away the acids and that which is detrimental to the plant and lets it grow.

Now, I tell you this because it is clear that none of us, when we were especially in the construction of the surface mine, we did not consider steep slopes as a major problem. Well, areas involving the values that the chairman has discussed and that you are all familiar with and which there is great value in the resource, and with the necessity of the environmental recovery, with this particular tool there is going to be many places and the average cost, I will tell the Chair, the average cost of installation is somewhere around \$400 an acre of this drip irrigation system, and the most expensive one they have ever had is something like \$2,000 an acre, so it is well within the ball park of what we are talking about.

I am sorry, but this is a bad commercial, because I cannot give you the name of the people who have done the most work on this, but they are on the west coast and in the Southwest. And I know that there is a farm in Queen Creek, Ariz., that has 2,700 acres of pecans and they irrigate that in an area that has to be irrigated, they irrigate that with one irrigator, this drip irrigation system, and they are using only 30

percent of the water they used to use for the same number of trees on that farm.

And if you will call my office, in fact, I can get you some material on this that will at least let you evaluate it. But, I went into this lengthy thing, or this lengthy explanation, because I hope we do not lock ourselves into standards in which we are arbitrarily eliminating areas. At least we ought to have some kind of recognition of the fact that maybe the technology or the state of the art will reach the point where these things are valuable.

You know, high sulfur coal might someday be an asset.

I do not know, but we have a tendency to be very arbitrary in order to meet the current problem and, of course, the bureaucracy is locked into that, into the necessity to be arbitrary because they are forced into that position, and it just seems to me, Mr. Chairman, that it is almost a requirement that we be at least flexible enough to recognize that the technology is not a static situation, and that areas which are now designated as unsuitable might be suitable and there ought to be some language on the reclamation that if you can come back in and demonstrate that you can meet the social as well as the economic needs, why we will reconsider it.

That is really a fascinating thing, Mr. Chairman, and I would like to send you something on it.

Mr. MELCHER. I am delighted that the gentleman from Arizona has brought up this subject, because I think it is pertinent, and I will be very anxious to look over the material.

Do you have anything further you would like to ask?

Mr. STEIGER. I just have one question.

Mr. MELCHER. Certainly. Continue.

Mr. STEIGER. In your entire structure, is there any provision for the operator to come forward with a suggestion as to what would be a good area, initiating, in effect?

Mr. TURCOTT. Yes, very definitely. It comes about in two ways.

First, Congressman Steiger, we have innumerable applications for coal leases on land now. They have been building up for several years. And we have also rather a large number of applications for leases wherein the applicant in previous times has been given a prospecting permit, and he is applying, he has found coal, as validated by the U.S. Geological Survey, and he is now applying for a preference right lease.

In addition, we do plan, we have a time frame on these charts to have an additional call for nominations of areas. It will be after the environmental impact statements, sometime in December or January.

Mr. STEIGER. Well, my concern was—

Mr. TURCOTT. For nomination of likely areas.

Mr. STEIGER. If we have an operator who comes in and says I want to do this, are we forced to tell him well, we have to wait until we make our overall evaluation and see if this fits, or will we then just plug his request in and have it evaluated as an ongoing thing? That is really what I am asking.

Mr. TURCOTT. Well, yes, unless he can meet the short-term criteria, Congressman Steiger.

Mr. STEIGER. I am talking about new, so I would assume he could not then.

Mr. TURCOTT. Well, it will have to be plugged in and run through the whole process, yes, sir.

Mr. STEIGER. But, there is a mechanism to plug it in?

Mr. TURCOTT. Yes, very definitely.

Mr. STEIGER. That is all.

Mr. MELCHER. Thank you very much.

Thank you, George, and I thank all of you gentlemen for a fine presentation.

The subcommittee will stand adjourned.

[Whereupon, at 12:20 p.m., the subcommittee adjourned subject to the call of the Chair.]



