Senator METCALF. The articles will be printed and the photographs kept in the committee files.

(The information referred to follows:)

[From the New York Times, Mar. 5, 1967]

INDUSTRY MIRACLE IN FLORIDA

PHOSPHATE COMPANIES IN POLK COUNTY MEND THEIR WAYS, RECLAIM BLIGHTED AREAS FOR RECREATION, BEAUTIFY LAND

(By C. E. Wright)

LAKELAND, FLA.—Each year, Polk County, which lies between Orlando and Tampa in central Florida, plays host to a million tourists. The principal attractions are Cypress Gardens, near Winter Haven; the Bok Tower at Lake Wales; the county's many lakes and unexcelled fresh-water fishing; the largest citrus acreage of any county in the state, and the highest elevation in Florida—325 feet above sea level at Lake Wales and 215 feet here at Lakeland.

This is also cattle and agricultural country, but, above all, it produces more than 70 per cent of the nation's phosphate ore. Last year, this amounted to more than 20 million tons.

Sixteen companies of national renown process phosphate here, but only eight of them mine the ore. These mining operations are largely concentrated in the western part of the county and along U.S. 60, which crosses the state from Tampa to Vero Beach.

Short distances

Major north-south highways also pass through Polk County, including Interstate 4, U.S. 17–92 and U.S. 98. All points in the county are within easy driving distance of both Orlando, which is in Orange County, and Tampa, which is in Hillsborough County.

At one time, the view that motorists had in passing through the phosphate region was blighted by huge mounds of the raw product. Then, in 1961, the phosphate miners, through the Florida Phosphate Council, proclaimed this policy:

"The phosphate mining companies * * * adopt as a policy the planning of mining activities * * * so that the land involved shall help meet the esthetic and practical needs of the community."

Since that time, the phosphate-mining industry has pursued a program of land reclamation and landscape engineering that possibly has had few, if any, equals in any other mining areas of the United States.

Not only have community relations been greatly improved, but the area also has become a pleasanter and more attractive place for both residents and visitors. Meantime, another problem stemming from the processing of the ore—pollution of air and water—has been virtually overcome.

Pollution controls

The companies have spent some $30-million on research and equipment to minimize pollution. Operation of these control systems costs about $4-million a year.

Thousands of acres of mined-out land have been reclaimed for recreation purposes. Extensive tracts have become public parks, while golf courses have been built on other restored acreage. Additional land has been used for planting pine trees, citrus groves, and field and truck crops, and for homesites.

Reclamation has created hundreds of spring-fed lakes throughout the area, and three fish-management areas have been created by the Florida Game and Freshwater Fish Commission. These contain 45 lakes, of which 25 have been stocked with large-mouth bass, channel bass and bream.

So important has fresh-water fishing become in these management areas that the Fish Commission keeps a resident fish biologist on the job at all times to improve the angling. Last year, Polk County led the state, as it had in previous years, in the sale of fishing licenses. The management areas are:

(1)—Saddle Creek Park (740 acres, including 500 acres of spring-fed lakes). This reclaimed area was donated to the county by the American Cyanamid Company. There is a bathing beach on a lake, picnic tables, riding trails and nature trails, and there are plans for a rifle range. Saddle Creek is situated on U.S. 92 at a point east of Lakeland.

(2)—Christina Park (1,100 acres). This park is situated on State Route 37 halfway between Lakeland and Mulberry, and has been leased to the state for $1 a year by the Mobil Chemical Company, a subsidiary of the Mobil Oil Corporation. Fishing, boating, picnicking and other outdoor activities have made this park one of the most popular recreation areas in Central Florida. It has 250 acres of water in a dozen large pools.

(3)—Pleasant Grove Fish Management Area (505 acres, with 31 pools, all rehabilitated phosphate pits). This area, which lies on U.S. 60 at a point 20 miles each of Tampa, is leased to the Game and Fresh-Water Fish Commission by the Agrico Chemical Company, a subsidiary of Continental Oil. According to the commission, the most advanced fishing techniques are being used to manage the pools and to produce the best possible fishing.

Other parks

In addition to these fish-management areas, other public parks have been created. One of the first was Peace River Park, on the Peace River in Bartow. The 110 acres of this park were donated by Mobil's predecessor, the Virginia-Carolina Chemical Corporation. The park is operated by the county as a playground for residents and visitors. Water sports, including skiing, are among the activities.

To the Florida Audubon Society, American Cyanamid has donated 300 acres of land east of Lakeland and has leased 13,000 acres of reserved property, some of which has been mined. This will be kept in its natural state for bird-watchers.

Golf course

Cyanamid has also sold 325 acres of reclaimed land at Sydney, 15 miles east of Tampa, for a private 18-hole golf course. The development will cost $500,000, of which $385,000 will be spent for a plush clubhouse.

Also, a semi-private, 18-hole golf course has been created on land purchased from American Cyanamid. The property is off State Route 33A at a point near Lakeland.

In addition to providing reclaimed land for public use the projects being carried out by various companies have provided many other noteworthy results. For example, Agrico Chemical now has 11 million pine trees on 45,000 acres. This is the largest planted forest in South Florida, and Agrico harvests 12,000 cords of wood from it each year. The wood is sold to pulp and paper mills.

This company reaped a public relations benefit when it opened forests for hunting, fishing and camping. Some of the waters on Agrico's land yield bass up to 10 pounds each. Hunters find quail, wild turkey and wildcat.

Grass planted

The International Minerals and Chemical Corporation covered 500 acres of ponds with phosphate tailings (clay and sand, and planted watermelon and grasses thereon. It plans to expand the project to 1,000 acres.

The Agricultural Products Division of W. R. Grace & Co. will reclaim 1,165 acres of land adjacent to the town of Mulberry, which is unable to expand toward Lakeland to the north and to Bartow to the east. These three cities form what is known as the "golden triangle" of Polk County.

This company has also aided the city of Auburndale with a unique project. Unmined reserves adjacent to that city were formerly a breeding place for mosquitos.

Grace cleared the undergrowth, restored the flow of fresh water through canals, and is maintaining the land so that the insects do not return. Needless to say, the city's residents and visitors are grateful.

The Armour Agricultural Chemical Company did a similar mosquito-clearance job for Bartow. It cleared 160 acres on the western edge of the city, part of it within the city limits. The tract has been reclaimed and will be used for residential development.

In the field of housing, American Cyanamid will reclaim 2,000 acres adjacent to Lakeland for development as homesites. Another 220 acres southeast of Lakeland are now being similarly developed.

CITRUS GROVES

The development of citrus groves has been another major result of land reclamation. For example, phosphate companies have planted more than 5,500 acres of citrus in the Polk-Hillsborough area. The largest citrus grower among these

concerns is the International Minerals and Chemical Corporation, which has 2,000 acres under cultivation.

The aim of the phosphate miners now is to reclaim one acre for each acre mined out, a process that is restoring the countryside to the attractiveness that the remainder of Polk County presents to the visitor.

Only a short driving distance from the phosphate area is Winter Haven and its Cypress Gardens, which has already planned a multi-million-dollar expansion in anticipation of greater tourist volume from Disney World, a vast project soon to rise near Orlando. The Cypress Gardens Sheraton, a 165-unit motel opposite the entrance to Cypress Gardens, was opened last month. It has a rooftop convention hall seating 700, while another convention hall will seat 400.

Here in Lakeland, plans are being discussed for a civic auditorium that would be used for such varied purposes as sports, recreation and cultural entertainment.

MINING'S GREEN THUMB—MINE PLAN FOR TOTAL RESOURCE MANAGEMENT—SIMULTANEOUS MINING-RECLAIMING OF PHOSPHATE HOLDINGS IS MORE ECONOMICAL—CREATES USABLE LAND FROM WHAT ONCE WAS CONSIDERED USELESS SWAMP, AND DEVELOPS PROPERTY FOR HOUSING, RECREATION, CONSERVATION, FOOD PRODUCTION OR FOREST PRODUCTS

One of Florida's greatest assets—the richness of its phosphate deposits—contributes handsomely to the economic importance of the state and its people. Jobs, payrolls and business activities of phosphate mining add more than $250-million a year to Florida's economy. The industry also employs over 10,000 state residents, who earn more than $70-million annually. In addition, allied industries furnishing goods and services to the phosphate producers employ thousands of other workers earning many more millions of dollars.

Phosphate shipments also help make Tampa the largest port between New Orleans and Norfolk, ranking it among the first six ports in the nation in freight car unloadings. In 1966, Florida's production of 21.0-million long tons of phosphate rock accounted for about 28% of the global output of approximately 75-million long tons. From this state's total, 7-million long tons of phosphate rock were exported to foreign customers, a market vital to the future economic health of the industry and the community around it.

These are the dollar and cent values of the industry to the public. What is not commonly appreciated are the additional dividends contributed by the industry in the form of land for housing developments, for crops, for wildlife refuges, and for recreational activities. These added benefits are all possible because of a voluntary program of reclaiming phosphate land after it has been mined.

Coordinating this voluntary plan is the Land Use & Reclamation Committee, of the Florida Phosphate Council (FPC), whose members are: Agrico Chemical Co. Div., Continental Oil Co.; American Cyanamid Co.; Armour Agricultural Chemical Co.; Borden Chemical Co.; Smith-Douglass Div.; W. R. Grace & Co., Agricultural Products Div.; Farmland Industries Inc.; International Minerals & Chemical Corp.; Mobil Chemical Co., Agricultural Chemicals Div.; Occidental Agricultural Chemicals Corp.; and F. S. Royster Guana Co. A non-profit trade organization of Florida phosphate rock processors, FPC is largely responsible for this pictorial review of what is being done with reclaimed land in the industry.

The most sophisticated method of land restoration—simultaneous mining-reclaiming—was developed in 1960 by American Cyanamid Co. This system evolved over many years, and was an outgrowth of a need to reduce reclaiming costs to a reasonable amount. Earlier attempts at land reclamation produced costs exceeding $1,000 per acre, and this figure was considered uneconomical in this highly competitive plant food raw materials industry. Under the new method, all land mined, except that needed for waste colloidal clay settling and water conservation basins, can be restored immediately to a value that is equal or greater than its original worth.

Essentially, land reclamation is made an integral part of mine planning and mine operations by deciding before exploitation starts what the ground should look like after the deposit is depleted.

Since phosphate rock removal leaves pits which eventually become lakes, it may be desirable to plan for these lakes in a logical manner. Mine cuts are designed to accomplish this, and the engineering layout on the preceding page illustrates the method.

The system involves the division of large tracts of mineable land in smaller segments, which are in turn subdivided in a series of smaller blocks. These blocks, and their sequence in mining, allow for the movement of the draglines and pipelines as mining progresses. Mine managers must keep in mind that the blocks are to be a unified tract of usable land when mining is completed, and take in consideration the mine depth, the overburden to mine depth ratio, the reached of the dragline, and the contour of adjacent property.

NEW SYSTEM CUTS RECLAIMING COSTS 40 PERCENT

Conventional mining employs cuts 200-ft wide (using draglines with 175-ft booms) up to 2,000-ft long. Overburden is cast in adjacent cuts, usually in high banks.

By contrast, the simultaneous mining-reclaiming technique pivots short cuts around what will be a future lake, distributing overburden in previously mined cuts to about ground level. Bulldozers then have a relatively easy job of grading the overburden as planned.

For example, the layout shows a plan which anticipates an overburden ratio of about 50%. In this case, cuts are designed for 250-ft widths and 400-ft lengths, backed by another 225-ft wide cut. The area thus reclaimed represents 310-ft in land measurement with a 310-ft lake. Note how the pipeline system (shown as a solid line) anticipates mining progress and only a minimum number of changes.

Cyanamid's experience indicates that the cost for mining with simultaneous reclaiming is about on par with conventional methods, but has found that reclamation costs are slashed by 40%.

COMPANIES RECLAIM LAND VOLUNTARILY

Mining companies represented in the Florida Phosphate Council voluntarily pledged that their mining will be conducted so "mined land will be reclaimed when possible and will meet the esthetic and practical needs of the community."

It is not possible to restore all land to the condition indicated in the illustrations. Large areas must be used as setting ponds for storage of clays, wastes from the beneficiation plant, and as part of the vital water recirculation system for process needs. However, once such areas become inactive, they may be used for a variety of agricultural purposes.

As the phosphate area grows economically, with a larger population needing more usable land, the value of most mined phosphate land will appreciate and make reclamation more attractive.

Even now, it is estimated that phosphate companies are currently reclaiming average equal to 75% of that mined. In addition, much mined-over lands is in the hands of private investors who are reclaiming it themselves for home and business sites, as well as for agriculture.

RECLAIMED LAND SERVING THE PUBLIC

Reborn land (reclaimed) is a bold idea which originated from the phosphate companies with the aim of upgrading and advancing the general welfare of the community. The basic contribution of these companies consists of maintaining a profitable operation which benefits the overall economy. However, of almost equal importance is the development of valuable land from property once left upturned and fallow after mining was completed. It is essentially an obligation fulfilled on a voluntary basis.

No longer is scarred, useless wasteland the necessary aftermath of phosphate mining. Proof of this statement exists in the impressive array of recreational areas available for the enjoyment of the public. These parks and lakes were contributed by the various phosphate mining companies from land that has been mined and then reclaimed for other uses.

One of the finest examples of this program is a 315-acre tract of land given to the Florida Audubon Society for use as a wildlife sanctuary. This donation by American Cyanamid Co., established the largest reserve in the state owned outright by the Society for the preservation of indigenous birds, beasts and fish. It is a big step toward conserving our natural heritage.

Outstanding among the many beautiful parks in existence is Peace River Park, east of Bartow, and Saddle Creek Park, east of Lakeland, Fla. Peace River Park, turned over to the city of Bartow, and Saddle Creek Park, now a popular beach,

picnic, and scenic trails area, were deeded to Polk County by American Cyanamid Co. The many lakes in the Saddle Creek Park make it an ideal spot for the fishing enthusiast.

A large public recreational area south of Lakeland, known as Christina Park, is leased (rent free) to the community by Mobil Chemical Co. This land was once mined hydraulically, but because of the poor recovery methods then available, enough mineral value still remains in the area to warrant mining it over sometime in the future. Until then, it will be used as a public park and, eventually, it will be mined, reclaimed, and afterwards made available again for public use on a permanent basis.

Just east of Tampa, on a mined-over tract of land is the Pleasant Grove Fish Management area, which is under the supervision of the Florida Game & Fresh Water Fish Commission. This area, partially owned by Continental Oil Co. and American Cyanamid Co. is extremely popular.

Education has been a recipient of the benefits of phosphate mining too. Armour Agricultural Chemical Co. deeded the Polk County school board a piece of property built-up from mineral exhausted land, on which an elementary school is presently located.

In 1966, Armour Agricultural Chemical Co. deeded the Florida State Road Dept. a tract of land along the Bartow city limits. This property will serve as a roadway connecting state Highways 60 and 555, and will allow travelers going south to bypass Bartow. More important, it keeps heavy truck traffic off city streets.

Armour has also reclaimed 169-acres within Bartow city limits, and will soon deed the property to a local development company that participated in the reclamation project. This is land much needed by Bartow for residential building.

Also completed in 1966 is a new road built by International Minerals & Chemical Corp. upon old tailing deposits left from one of its plants. After county engineers found the new road conformed to government specifications, the public road it replaced was closed.

Especially noteworthy for its cultural value is the gift of a 10-acre site by International Minerals & Chemical Corp. to the city of Bartow for a $1.0-million civic center. Ground was broken for the start of this project in October 1966 (to be opened in July), and the 10-acres—which were just outside of Bartow—have now been incorporated within city limits. Bartow city manager and other officials plan a 40-acre recreational complex in this area, involving the civic center, swimming pools, tennis courts, plus football and baseball fields.

The additional 30-acres needed to complete the complex are now owned by Mobil Chemical Co., and a section of it is being mined.

Agrico Chemical Co. has some 45,000-acres of forest preserve, which are actively managed and improved.

Recently, Agrico in cooperation with the Gulf Ridge Council of the Boyscouts of America, has made available more than 10,000-acres of forest area for hiking and camping. Five camp grounds have been built along some 20 miles of marked hiking trails. Agrico officials say the campsites are booked solid every weekend.

RECLAIMED LAND SERVING THE INDUSTRY

On the profit side of the picture, diverse enterprises have been formed to take advantage of reclaimed phosphate land, and the products derived from the effort bring in important sums of money, which help pay taxes on the large land holdings retained by each company.

Since Lakeland represents the hub of the citrus area, it is natural that reclaimed land in this section should be tested for growing orange and grapefruit crops.

More than 5,500-acres of citrus groves are owned by the phosphate companies, and most of them are operated commercially by their own personnel.

Reclaimed land is proving to be ideal ground for grove sites, and Mobil Chemical Co. leads in citrus plantings on reclaimed land, although Continental Oil Co. also has substantial orange and grapefruit trees on restored mined-out property.

Mobil alone has 825-acres under test in its Phosmico reclamation area. Approximately 325-acres of this total are in citrus plantings. Besides this, about 350-acres outside of this area are also planted with citrus trees.

Feeding the needs of the groves for tree stock requires a nursery, and Mobil grows its own citrus trees for use in its expanded program for reclaimed land.

The 8,000 young trees being raised in the Phosmico nursery will plant more than 100-acres of grove.

INTEREST IN CITRUS GROWING INCREASES

The interest in reclaimed land for citrus grove sites is increasing rapidly since initial experimental work is complete, and it has been shown that profitable yields can result from such plantings.

The largest citrus grower among the phosphate companies is now International Minerals & Chemical Corp., with 2,000 acres in citrus cultivation, but not necessarily on reclaimed land.

One-third of International Minerals' large fruit acreage is already producing, and it is expected that the balance will be bearing fruit within two to five years.

Future plans by International Minerals call for additional citrus plantings on reclaimed land. As a result of a special study conducted by its staff, IMC saves mature trees from land assigned for mining, severely cuts the trees back, and then transplants them to reclaimed land. In addition to saving the trees, experience shows that the trees bear fruit much quicker than nursery stock.

International Minerals says that all of its producing groves are yielding well above the state average of 200 or more boxes of oranges per acre.

VARIETY OF COVER CROPS EVALUATED

IMC's most extensive reclamation project has as its site the 1,000-acre Achan tract on which reclamation has been completed. Most of the area was occupied by settling areas and debris piles, bounded by Highway 37 on the east and State 640 on the south. A triangular area at the intersection of these two roads is being left as a possible wayside park location.

Of the total acreage available about 120 acres of the higher and best drained ground are being reserved for citrus, with some 80-acres to be planted in 1967.

Both slash and sand pines are being planted with 69 acres being combined pasture and pine land. Another 35 acres are being planted exclusively to pines. One planting of sand pines is for Christmas trees.

Another 180 acres will be planted with Argentina bahia, and Pangola grasses for pastures.

Irrigation for the groves will be with pump and power units salvaged from an old grove, with the water being taken from the old Achan well.

Portions of the Achan tract, during reclamation, have been leased for watermellon crops.

First step toward the reclamation, after the Achan washer was closed in 1961 and moved to its present location, was the digging of six miles of ditches to begin draining the settling areas.

The Achan reclamation project is one of several where phosphate companies have carried land full-circle through mining, as well as use as an active settling area, removal from settling systems, reclamation, and return to active use for other purposes.

Continental Oil Co. planted 110 acres of citrus trees during the 1965–1966 season, and now has 115 acres planted on reclaimed land. Conoco's citrus plantings will continue as suitable grove land is developed and the economics of citrus growing remains sound.

Agrico Chemical Co. has recently reclaimed an old settling area comprising 400 acres. This is now leased to local truck farmers, and due to the high level of fertility, this crop land has proven very successful.

W. R. Grace & Co. has profited so well with its citrus crops that it has scheduled fruit-tree plantings of 120 acres annually for the next five years, and much of it will be located on reclaimed land. It already operates an additional 150–175 acres which consist largely of grapefruit plantings.

Mobil is also experimenting with other crops to determine how they will grow in reclaimed soil. All of this experimental work is being carried out in the Phosmico reclamation area, with 12 acres planted in peaches and 1½ acres in blackberries.

Because of the universal settling pond problems, Mobil's experience with cover crops should be of interest to many mine managers. This company now has 100 acres of pasture on old waste colloidal clay areas with bahia, Argentina bahia, Pensacola bahia, and Aeschynomene cover. In addition, three acres have been designated for planting with Okinawa lespedeza, buffelgrass, signalgrass, arb peanuts and hemarthria atlissima grass and legume. Although it is too early to say which is the most satisfactory cover, tests made by mining companies outside Florida indicate that buffelgrass is a suitable cover crop.

Other projects exist, but their inclusion would only duplicate what has been illustrated in this article previously. Needless to say, phosphate companies are serving the community and are profiting from their efforts of reclaiming mined-out land.

Attesting to the importance placed on these many contributions of reborn land is Bartow's annexation of at least 60 acres of International Minerals & Chemical Corp.'s land over the years. Reclaimed land is truly contributing to the communities in "phosphate land."

Mr. Cox. Thank you for allowing me to appear.

Senator METCALF. The photographic material which is not susceptible to reproduction in our hearing record will be kept for the committee's reference. The other materials you submitted will be printed as a part of your remarks.

Senator Jordan?

Senator JORDAN. Mr. Cox, what is the value of the phosphate industry in dollars, since its inception in Florida? Do you have that figure?

Mr. Cox. I can approximate a figure, Senator Jordan. The industry has been active in Florida since about 1885. Of course it was very small in the early days. The present capital investment is something over $500 million a year. There are over 10,000 people employed. The current contribution to the central Florida economy is something over $200 million per year.

Senator JORDAN. Annually?

Mr. Cox. Yes, sir; annually.

Senator JORDAN. In terms of total production you wouldn't have a figure? Could you supply such a figure to the committee?

Mr. Cox. The total production last year was about——

Senator JORDAN. No; I am speaking of the industry and the total extraction from the Florida phosphate beds.

Mr. Cox. I do not have that figure, sir.

Senator JORDAN. Can you get it?

Mr. Cox. Yes, sir.

Senator JORDAN. I wish you would. What I am trying to establish, as we go along here, is the economic value of the land before mining started, the economic value of the product removed, and the subsequent value of the land after removal of the product mined.

I think that is important as we develop the facts for this committee.

Except for the trouble you have with your colloidal clays the value after mining would appear to be quite as good as it is before mining. Is that a fair statement?

Mr. Cox. In some cases, Senator, the value is significantly higher. In central Florida even today with the Florida land boom on, rough lands in central Florida sell for $125 to $150 per acre. This is today's market price for phosphatic type lands prior to the discovery of phosphate.

The value of the minerals from these lands is probably $60,000 to $70,000 per acre, $6 or $7 per ton times an average figure of about 10,000 tons per acre extracted.

The clay ponds themselves have a value and have been sold recently. They have been tested in the marketplace at a value of some $50 per acre to private landowners who are willing to pay that now in anticipation of ultimate reclamation privately. Reclaimed lands in the rural areas have a value again of about $150 per acre. Reclaimed

lands in the immediate environs of the communities have values of $1,500 or $2,000 per acre.

Senator JORDAN. Of course the whole country has experienced rising land values. This is true throughout the whole country, more particularly so perhaps in your area down there.

Mr. COX. I was very jealous of someone who talked about $8-an-acre land.

Senator JORDAN. Thank you. Thank you, Mr. Chairman.

Senator METCALF. Mr. Cox, I think that everyone on the committee and everyone that is aware of the accomplishments of the phosphate industry commends you for your activity, your initiative in having this voluntary reclamation and restoration of the land.

The work of the industry, as you have described it, is exactly what I think Secretary Udall and I conceive of what we would like to achieve by this legislation. Sometimes you have restored it to agricultural land. Sometimes you have given it to conservation organizations. I serve on the Migratory Bird Conservation Commission, which invests duck stamp money for additions to our water fowl refuges, and some of that land has been given to the refuge system. Sometimes it is used, as your pictures so eloquently show, for swimming pools, for recreation areas, for fish and lakes, boating areas, and I do think that you have done an outstanding job.

You merit the commendation of all of us. I doubt if the passage of this legislation would affect you in any way whatsoever. I think you are doing the kind of thing that we are seeking to do in some other areas and had other industries and other mining companies been as forward looking as you are there wouldn't have been any legislation such as this proposed.

I can see that you want to comment.

Mr. COX. Thank you, Senator Metcalf, for the commendation. Thank you on behalf of the industry. We oppose the present proposed bill, not because we oppose land reclamation. Our record I think is clear. Our record speaks for that.

Senator METCALF. It speaks for itself.

Mr. COX. We feel that some of the requirements of the bill are not necessary—the necessity for permits, the necessity for submission of detailed preplanning, the administrative routines that will be inherent in such a bill in implementing such a bill. These are the parts of the legislation that we opposed and oppose quite vigorously. We do not oppose the purpose of the bill.

Senator METCALF. Certainly I am grateful for your appearance here and there is a great deal of persuasiveness in your presentation in view of the record of your industry.

Thank you very much.

Mr. COX. Thank you.

Senator METCALF. Now we will have Mr. Widner and Mr. Spurling of Missouri.

STATEMENT OF S. R. WIDNER AND JOHN SPURLING OF MISSOURI

Mr. WIDNER. Gentlemen, on account of the duplication we are going to throw our notes away. We will file a statement.

We want to talk to you a little bit.

Senator METCALF. Thank you very much.

Mr. WIDNER. We represent a new area that is being opened up in western Missouri, 18,000 acres that will be mined by the Gulf Oil Co., and we are sent here by the residents of that community.

Senate bill 3132 will help us immeasurably because we will be at a standstill as we have been for 75 years because we cannot get anything done toward reclaiming that land. Senator Jordan has been wanting to know what land is worth before and after. Before that land was worth $250 or $300 an acre. Land in that area is being abandoned as it is worked and being turned back, 50 percent of it, to the counties and the rest is going in as wasteland and valued at $5 an acre.

I bought some at $35 an acre and right beside it I am putting in an irrigation deal that will cost $40,000. I operate about 4,000 acres there, and this will be worth about $40,000 and that land right beside it that I bought for $35 will be worth $300 an acre.

That is the before and after.

I want to say and I want to impress upon you that bill 3132 will help us wonderfully. Now, as to what is going to happen to us in our neighborhood of 18,000, I want to say that 70,000 acres in Kansas and 60,000 acres in Missouri have been mined and, contrary to what we heard here yesterday, none of it has been reclaimed. Well, let's say that a negligible part has been reclaimed and the rest has been there for 5, 10, 15, or 75 years and will not be reclaimed unless something is done here.

I would like to introduce at this time Mr. Spurling. He is also a farmer in that area. He has a statement he wants to read to you and then I want to make a few comments afterward, but if you want to ask us any questions we would welcome them.

Senator METCALF. We will refrain from interrogating until after we hear from Mr. Spurling.

Mr. SPURLING. Senator Metcalf and Senator Jordan, I am John Spurling of Fort Scott, Kans. I am chairman of the Crawford County Soil Conservation District, also chairman of the Southeast Kansas Reclamation Committee. I am also a farmer and a conservationist.

In Kansas, approximately 70,000 acres have been disturbed by strip mining and according to statistics there are more than 1 million acres that can and will be mined for coal in the future.

In the State of Missouri approximately 60,000 acres have been surface mined and likewise according to statistics more than 1 million acres will be mined. Thousands and thousands of acres have already been purchased or leased by mining companies.

Strip mining in the United States has grown into a tremendously large business. Our natural resources of land and water are being depleted at a rate beyond imagination due almost entirely in some States to unabated strip and surface mining.

In Kansas the average size farm is 350 acres. The 70,000 acres that have already been mined represent 200 farmers who have been forced from the land. Now we all know that each farmer in the United States produces enough food for 38 people.

In other words, for each 350 acres of land in Kansas that are destroyed by surface mining, 38 people must find food products from some other source, but with proper control and reclamation requirements we can have both farming and mining.

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God put coal under the earth for man's use, and He also made available large powerful machines to obtain this coal, but we do not believe He meant complete destruction in the process.

In Kansas and Missouri the coal companies' investments in tax-supported facilities are held to an absolute minimum. All attempts to impose a severance tax on coal has been beaten.

How practical is it for the Federal Government to spend thousands of dollars for soil and water conservation practices when the same land so benefited by such practices will, within a few years, be completely destroyed by strip and surface mining?

Should taxpayers have to pay to restore the affected area when the damage was done by one industry? Must our natural resources suffer complete destruction for the profits of so few?

We cannot and we must not continue on this disastrous course. We are running on a schedule that is approximately 80 years late in the enactment of reclamation laws, but there is no time like the present to begin.

The mining companies state that without the minerals they mine we could not remain a powerful Nation. This is true, but a hungry nation is not a powerful nation. The philosopher Seneca once said, "A hungry people listens not to reason or cares for justice or is bent by any prayers."

Gentlemen, this coming population explosion and the food shortage that will invariably come cannot be taken lightly. In areas of overpopulation, starvation is already prevalent, and as our population soars, we too will face the same crisis.

At present, thousands of acres of land are lying idle due to the feed grain program, the soil bank programs, and so forth, but even with these acres back in production our need for food will eventually surpass our ability to produce it.

The land and water of the United States belongs to the people of the United States and its future generations who must be protected against the total destruction of our natural resources.

Some of the States in our Union do have strip mining laws, and many do not. In Kansas a strip mining law was passed this year, but since the coal companies were the authors of the new law, the conservation people of Kansas are skeptical and the effectiveness of the new law remains in doubt.

Some day in the coalfields of America, after the coal companies have left and taken their money with them and left a desolation of complete waste and destruction behind, welfare and not mining will provide income for the people who remain.

Our Nation cannot face the future with the remnants of these horrible manmade scars across her face. We must eventually pay a staggering price for dirt-cheap electricity and repair the damages caused by the huge strip machines.

It is aboslutely not our intentions to cause a hardship to any company or put any coal company out of business, as almost everyone uses coal or a byproduct of coal in his everyday living. But if this land must be stripped it would seem to us, it should be restored to a condition that would permit the establishment of economically feasible conservation practices and use of the land within its best capabilities for public and community needs.

The American population is growing rapidly; estimates of the U.S. Bureau of Census indicate a population of 300 million by the year 2000. We have now surpassed the 200 million mark. We are running full steam ahead on a course between diminishing natural resources and an ever-increasing population.

God gave us one creation and there will be no more, but it can be effectively diminished by industrial processes which include strip mining for coal and similar operations. Under any enlightened philosophy the present occupants of the land hold it in trust for future generations and are under a positive obligation to pass it on in a tolerable state.

Who will pay for the reclamation? We know, or we should know, that reclamation costs will be included in the price paid by the consumers. But if this is done, society will have discharged its responsibility to the future.

Recently one of the major coal companies in our area signed a contract with a Kansas power company for 12 million tons of coal to be delivered over a period of 20 years. At 3,000 tons of coal per acre, a total of 4,000 acres must be mined to achieve this goal.

We know this particular power company has a total of 199,625 customers. Figuring 200,000 customers, which they could easily have in 20 years, and figuring reclamation costs at $300 per acre, this would amount to an increase of approximately—now get this—3 cents per customer per month, or 36 cents a year. We feel this will not cause a hardship to anyone.

No doubt a powerful lobby will oppose this strip mining law but no lobby is so potent, however, as a lobby of embittered citizens bent on protecting the beauty and prosperity of this Nation, and their tax money as well.

The counterattack against a grave danger to our welfare can begin this session of the 90th Congress. No more imperative business will come before this session than truly effective regulations of strip mining.

The coal companies advocate, "Leave us alone, we will take care of our own reclamation."

Mr. Chairman, the coal companies in our area have done practically nothing since they began mining 75 or 80 years ago. An attempt at restoration has been made but the majority of the mined lands still lie in complete destruction. They also advocate, "This is not the proper time to impose Federal legislation."

Now, Mr. Chairman, I advocate, "This is the time and this is the place." We must have Federal legislation, we must have rigid Federal legislation that will make the States shape up and get with it.

Some sources stress the spoilbanks will in time heal themselves. Now I have been on this earth more than 40 years. Some spoilbanks in our area were there 40 years before I came, and they have not healed themselves and they never will without help from the taxpayers.

If you would like to become sick at your stomachs, have your heart bleed for our future Americans, come into our area and watch the huge shovels rip, torture, and destroy the mother earth, God's greatest gift to man and the very thing which our existence entirely depends on. You will wonder how civilized man can be so cruel and yet advocate

what an asset they are to our society. With proper reclamation laws they can be an asset.

After everything has been said by the mining interests and stripped of window dressing, all that is left is this, "Let us mine wherever the deposits are found and wherever we can, economically to us, reclaim the land we will do so to whatever extent we see fit. If we feel that it is not economical for us to reclaim, let us mine anyway and let someone else at some other time bear the cost of whatever reclamation may be necessary."

There are not two sides to this issue. Quite the contrary, there is only one, and that one is complete control and reclamation on the affected areas in all future strip and surface mining operations.

Gentlemen, our future is at stake, it rests in your hands. Make it bright.

Mr. Chairman and members of the committee, thank you for the opportunity to appear before you, testifying in behalf of the people of Kansas and Missouri, urgently requesting the passage of Senate bill 3132.

Senator METCALF. Thank you very much, Mr. Spurling. Now you wish to make a statement, Mr. Widner?

Mr. WIDNER. I would say this: That the Secretary of the Interior and Vice President Hubert Humphrey were out to our country last year and they saw land that had been reclaimed and was raising 41 bushels of wheat and producing 300 pounds of beef per acre.

Now, we know that when it is properly done this land can be saved. We need the coal, but we need the land. And we thank you, gentlemen, very much.

Senator METCALF. Thank you very much for your very eloquent and moving statement. Senator Jordan?

Senator JORDAN. You have made an effective presentation of the irate and aroused citizenry of people who come from an area that has been abused, in your statement, by the miners.

Have you made such a statement before your respective State legislatures and if so, how were you received?

Mr. SPURLING. We might just as well not have been there.

Mr. WIDNER. We are wasting our time until we get a bill like 3132 to back us.

Mr. SPURLING. We have to have this, gentlemen.

Senator JORDAN. Is there any regulation of strip mining in the State of Missouri?

Mr. WIDNER. No.

Senator JORDAN. No regulation at all?

Mr. WIDNER. No.

Senator JORDON. And your law in Kansas is ineffective?

Mr. SPURLING. We do not know. It will not take effect until 1969. But the coal companies were the authors of the law and consequently we are skeptical of the effectiveness of it.

Senator JORDAN. Don't you have a government of the people in Kansas?

Mr. SPURLING. Yes.

Mr. WIDNER. It doesn't work. It is theory only. Thank you.

Senator METCALF. Thank you both.

Mr. SPURLING. Thank you.

Senator METCALF. Our next witness is Mr. Coyle, president of the Precision Aerial Reclamation of Kentucky. Mr. Coyle, we are pleased to have you before us and you may go right ahead with your statement.

STATEMENT OF WALTER A. COYLE, PRESIDENT, PRECISION AERIAL RECLAMATION

Mr. COYLE. Thank you, Mr. Chairman.

Mr. Chairman and gentlemen of this committee, I am Walter A. Coyle, president of Precision Aerial Reclamation, with headquarters in Middlesboro, Ky. I have been responsible for the pioneering of aircraft in several new phases of various industry involving very low-level mountain flying.

I was called into eastern Kentucky from my home in Scottsdale, Ariz., in February of this year and offered more or less a challenge to seed with an airplane approximately 1,200 of the roughest strip and auger mine acreage that could be found in the mountainous terrain around Middlesboro, Harlan, and Hazard, Ky. The feeling was, if the aircraft could complete this rough assignment successfully, it could be used in any of the mountainous Appalachian area.

The test was not only satisfactory, as confirmed here with photographs and a letter of confirmation by Kentucky State Area Supervisor Herbie Johnson of Middlesboro, Ky., but it far exceeded the coverage previously gotten by the outmoded methods of hand seeding and ground machinery.

With the aircraft, even the face of the high wall received good coverage of seed and fertilizer, as well as the lowest portions of the steep spills. I have been told it would have taken a ground crew of 40 to 50 people approximately 6 weeks to seed this acreage—but with one aircraft I successfully completed this 1,200 acres in 3 days. Since this time I have formed a company offering this aerial application service to the mine operators.

In my association with these mine operators, I have met no one who is opposed to vegetating and reclaiming the stripped or augered out areas. In fact many of the operators have gone to additional expense beyond the requirements of their State laws to see that the best job possible would be done in the reclamation of their projects.

In recent weeks I have been working in unison with the Surface Mine and Reclamation Association, headquartered in Pike County, Ky. Their chief objective is to erase the infamous image of the current surface miner to the general public and to make the general public aware of the new and modern methods the surface miner is using to reclaim the current acreage.

As you well know, the ill feeling of the general public borders very closely to contempt for these mine operators even though they are endeavoring, in the most expedient manner possible, to return their acreage to green grass and tree covered hillsides.

I feel that the current mine operators are being accused unjustly. I believe that this feeling of ill will and contempt is primarily brought about by the ever-present existence of the vast amount of orphan acreage that has been evident year after year for the residents of these States and the tourists visiting these States to observe. For those

of you who do not know, orphan acreage is that acreage that was left over and abandoned before there was law or public opinion against such practice.

I believe that the image of the whole surface mining industry, as well as the infamous image of the local State and Federal officials, who the public believes are allowing this to happen, will be greatly improved if not completely eliminated by the most expedient reclamation possible of this orphan acreage.

From a four-State aerial survey I have found that nature itself has made considerable progress in reclaiming much of this orphan land; however, in the past much of this natural vegetation would have been redisturbed by the necessities of having to build roads to get ground machinery and truckloads of material on to these benches to reseed them.

Now, with the introduction of the tried, tested, and proven method of aircraft application, this natural vegetation can remain undisturbed and man can assist nature by adding grass seeds, tree seeds, and fertilizer to these orphan soil banks and return these Appalachian Mountains to the beauty nature originally had planned.

Let us consider the time and cost involved in the project. First of all, with the use of aircraft this project would not take 20 years, as was previously suggested; instead, I believe with a sufficient appropriation, and using the best aircraft available for this type of flying, piloted by highly skilled mountain pilots and supervised in a safe and orderly manner, the whole of the Appalachian region could be reclaimed, gentlemen, in less than 3 years.

With the use of ground machinery there is no doubt that at least one-third of any appropriation for the Appalachian region would be spent on the building of roads to make these areas accessible. With the aircraft this expenditure is nonexistent.

In the State of Kentucky, as an example, there are estimated to be some 70,000 acres of orphan land, approximately 40,000 of which has been stripped and auger mined in the mountainous terrain of eastern Kentucky. The rest is area strip mined in central and western Kentucky.

I do not know the cost of grading these area strip mines back to the approximate contour of the surrounding terrain, but the seeding and fertilizing of this 70,000 acres could be done at a total cost of approximately $35 per acre, and even less where the condition of the ground necessitates less fertilizer than some of the acid areas.

As president of the Precision Aerial Reclamation Co., I wish to go on record as opposing the Surface Mining Reclamation Acts at issue here, inasmuch as I feel that Federal supervision of the mining industry is unnecessary, that the arrow of the whole problem points directly at the vast amount of orphan acreage existing, and that, as an alternate solution, instead of Federal supervision of the mining industry, the Federal Government should make sufficient appropriation to reclaim this orphan acreage with necessary seed and fertilizers in the most expedient way possible.

I would like to emphasize, Mr. Chairman, that the only role the Federal Government should take is in the reclamation of this orphan acreage.

I understand there has been some talk of an adjusted appropriation of $1.2 billion. When this proposal will be offered for legislation, I do not know, but my company is concerned with some 700,000 acres of land needing treatment in the Appalachian region right now. This 700,000 acres is approximately one-third of the total 2 million acres of land needing treatment throughout the United States. One-third of the $1.2 billion amounts to $400 million.

If, as I have stated, this acreage can be reseeded and fertilized for approximately $35 per acre, which is a total of $25 million, and should it cost another $25 million to do some grading that would probably be necessary on a percentage of this total acreage, we arrive at a total expenditure of only $50 million, which is a saving of $350 million of the proposed appropriation.

I would like to add here, Mr. Chairman, that I believe the introduction of any possible solution to this problem that can save the taxpayers $350 million merits considerable investigation. Neither the States nor the current operators should have to assume the obligations of the derelictions of the past.

It is my opinion that the best, if not the only way to bring the Appalachian strip coal mining industry to a standard acceptable to the general public is to eliminate the ugly scar tissue of the orphan acreage in the Appalachian region, and continue the present reclamation work on current acreage being disturbed by the surface mines throughout these States. This quite properly should be the only responsibility of the Federal Government.

I thank you gentlemen for giving me this time and opportunity to express my views on this most important issue before this committee.

Senator METCALF. Thank you, Mr. Coyle.

Senator Jordan?

Senator JORDAN. I have no questions. Thank you for your statement.

Senator METCALF. Mr. Coyle, it is your contention that the Federal Government should not require the mining companies or the strip miners to make any plans or contribute to the reclamation of land in the future? Is that your position?

Mr. COYLE. No, sir. I have observed that, as I stated, the operators are taking care of their current acreage in the most expedient manner possible. I believe that the whole reason for this hearing, the reason for the proposal of these acts, came from the pressure put on by the general public who have year after year observed this orphan acreage that nothing has been done about. They have pulled the blinds down, so to speak, on what was being done on the current acreage because they have observed this orphan acreage so often that they haven't taken the time to look at what is being currently done.

Senator METCALF. So you feel that the only function of the Federal Government should be to go in and reclaim and restore or recondition land that has already been abused and abandoned and hire companies, preferably yourself, to seed this area?

Mr. COYLE. That is correct to a point. I believe that any appropriation for this type of work should be put up for bid and I very affirmatively would bid on it, yes.

Senator METCALF. You have helped us here this morning in describing a method of reseeding and reclamation that certainly the committee

is glad to hear about, glad to know about, and glad to know about its success.

Thank you very much.

Mr. COYLE. Thank you, sir.

(The letter referred to follows:)

AERIAL SEEDING OF CONTOUR STRIP MINE LAND IN SOUTHEASTERN KENTUCKY—1968

During late February and early March 1968, aerial seeding of contour strip mined land in Kentucky, in counties of Bell, Harlan, and Leslie, was undertaken by Allen Coyle. Mr. Coyle used a mixture of Sericea Lespedeza, Korean Lespedeza, Kentucky 31 Fescue, and Perennial Rye Grass, along with Black Locust tree seed.

Prior to the flight, one foot square cardboard was smeared with grease and placed randomly on the bench and over the outslope. Immediately after the aerial seeding, a ground spot check was made to determine the extent of coverage obtained. All squares had an adequate amount of seed of each species sown.

A follow-up inspection was made in late April to check germination. The Perennial Rye Grass, Korean Lespedeza, and Kentucky 31 Fescue had begun germination and was from ½ to 1 inch high. The Sericea Lespedeza and Black Locust seed are not expected to germinate until around July 1968.

From observations and inspections made to date, I feel that an adequate cover of grasses, legumes, and trees will be found over the entire disturbed areas aerial seeded by Mr. Coyle.

HERBIE JOHNSON,
Area Supervisor,
Kentucky Division of Reclamation.

April 25, 1968.

Senator METCALF. Mr. Lewis Prater of the Idaho Bureau of Mines.

Senator Jordan.

Senator JORDAN. May I personally welcome Mr. Lewis Prater, who is here representing the Governor of Idaho. I have had copies of the Governor's testimony and I know Mr. Prater will make a good statement for his State.

Senator METCALF. I am glad to hear you as a representative of my neighbor, a representative of two of the members of this committee. Thank you very much.

STATEMENT OF LEWIS PRATER, IDAHO BUREAU OF MINES, REPRESENTING THE GOVERNOR OF IDAHO

Mr. PRATER. Thank you, Mr. Chairman. My name is Lewis Prater and I present the statement prepared for the Idaho Bureau of Mines by our director, Dr. Rolland R. Reid.

To begin, we wish to express our gratification that Federal agencies have come to recognize the desirability for surface mining and mined land reclamation practices tailored to the individual situation and needs within each of the States.

At the same time, we note that the Surface Mining Reclamation Act of 1968 sets up sweeping changes in both the regulation of surface mining practices and mined land reclamation requirements. Mining operations on private, State, and Federal lands are to be covered. Many of these lands are already controlled under overlapping jurisdictions involving several State and Federal agencies. Conflicting and overlapping responsibilities are common. S. 3132, if enacted, would compound existing difficulties just described.

The Public Land Law Review Commission is currently reviewing the laws and administrative regulations and practices applicable to

the public lands. When this task is done, major recommendations for changes to eliminate conflicting laws and to improve public land administration will no doubt be made. It would seem judicious to defer action on S. 3132 until the work of the Public Land Law Review Commission is complete. Moreover, the time limits contemplated for action by the several States appear to be unduly short.

A number of Western States are beginning to study questions of mining practices on the State lands, and Idaho is among them. The problems involved are substantial and will require more than 1 or 2 years for their solution. Cooperative efforts among the States are contemplated, involving initially the mining industry, the universities, and through the Federation of Rocky Mountain States. Hasty action within the States, forced by quickly passed Federal legislation itself not too thoroughly studied, may well lead to poor legislation injurious to the mining industry and thereby injurious to the whole of society, which is strongly dependent on minerals for its general well-being.

It is clear that regulation of surface mining practices and reclamation of surface-mined land in each State is primarily the responsibility of that State. The Federal Government, to the extent that it is interested in these matters, might well convey its interest to the States by means of a congressional resolution urging and encouraging each State to undertake the necessary studies and to enact in due course the necessary legislation. Or it might go a bit further and make some matching funds available to the States, to help with the costly and time-consuming studies that must be carried out before good legislation can be enacted.

Many of the proposed regulations and laws brought forward so far suffer from ambiguous terms and concepts that need to be brought into clear definition; such clear definition in many instances can only be accomplished through extensive research programs. When the work of the Public Land Law Review Commission is complete and the States have had sufficient time to carry out studies and enact good regulations for surface mining practices and land reclamation, then it will be time for the Federal Government, through the Congress, to look at the various State situations. At that time, a judgment can be made whether legislation of the sort represented by S. 3132 is still necessary, if so, then it can be taken up again.

Should the judgment of the Congress be that it is proper at this time to enact legislation of the type represented by S. 3132 then we would wish to participate in efforts designed to modify or amend several parts of the bill in an attempt to make it more workable in our view.

To illustrate the direction such work might go, we will comment below on a few difficulties that we see in S. 3132 in its present form.

Section 3(a) does not go far enough. While stating that surface mining is essential to the economy of the Nation, it should go further and state that because of its importance to the Nation, surface mining is to be actively encouraged in all possible ways to be consistent with the well being of the Nation.

Section 2(b) defines reclamation as reconditioning or restoration. What degree of such reconditioning or restoration is contemplated? Much ambiguity seems to exist here.

Section 2(d) defines a surface mine very broadly. Falling within this definition, and mentioned just to illustrate the breadth of the definition, are barrow pits used by State highway departments in road construc-

tion from which minerals are extracted by surface mining methods for use in highway construction. Is this intended?

Section 7. Each State being competent to conduct its own affairs with respect to regulations of mining within its own bounds, the Secretary should not have sole discretion to decide whether a particular set of State laws and regulations is sufficiently stringent. At the very least, some provision for judicial appeal should be provided in case substantial disagreement arises. The requirements set out for the State plan seem so severe that many mining operations might not become possible. Moreover, the requirement that criminal penalties be required for nonperformance seems indefensible. Many additional comments are possible here, but in the interests of space will be reserved for a later time.

Section 8. Two or 3 years are not sufficient for the development of a good State plan. Five years would be more realistic. The Secretary should not have sole power to issue regulations for a State. Provision should be made for judicial appeal in every case in which substantial conflict arises. No individual has the capability to arrive at the best judgments in all such cases. See especially section 8(d) in this regard.

Section 9 suffers from the same difficulties as section 8, especially as to the need for judicial appeal provisions in case of conflicts.

Section 11. This provides that the Secretary may issue such regulations as are deemed necessary to carry out the act. No specific provision is made in this section for hearings or judicial appeal from bad regulations.

Section 13. Here, as previously, it seems indefensible to set up criminal penalties for cases of nonperformance. The precedent, if any, is not known to us. Economic (civil) penalties would seem to be sufficient.

Generally, the tenor of this proposed law seems to be highly restrictive and even punitive, designed more to prevent mining than to encourage it, and thus not in keeping with the necessity to encourage mining in all ways possible and consistent with the well-being of society. This difficulty no doubt grows out of the fact that this proposed law was written by agency people all with views on one side of the question. It would be better to hold hearings on the content of such a law before it is written so that all interested parties could make their views and needs known. Only after such hearings should the law be written and then only by neutral persons who conduct the hearings.

Finally, it is much better that this be done in the several States and not at the Federal level at all.

In closing a few comments on S. 3126 are appropriate. Title I gives equal authority to Interior and Agriculture, which is sure to lead to difficult administrative problems. It suffers additionally from all of the problems raised with respect to S. 3132 and we view it in the same way as we do S. 3132, namely, any action on it should be held in abeyance until the outcome of the Public Land Law Review Commission's work. The remainder of the bill appears to be reasonably workable.

Thank you very much.

Senator METCALF. Thank you very much, Mr. Prater. Senator Jordan?

Senator JORDAN. Thank you for a constructive statement. You know the Public Land Law Review Commission was in our State last fall for part of 3 days and as a member of that Review Commission I note that we are going very extensively into the same problems that are covered by this legislation and we do expect to have some recommendations in this regard.

I know the Public Land Law Review Commission had been in most of the States where surface mining is engaged in and they did make a particular inspection trip over areas in Idaho where surface mining is now going forward.

Thanks for a good statement. I appreciate having you here.

Mr. PRATER. Thank you very much.

Senator METCALF. Mr. Prater, you mentioned that the introduction of a bill is only a preliminary matter and when you say it is better to hold hearings, that is what we are doing. I concur with my distinguished colleague from Idaho that we are grateful for your suggestions, your criticism, and constructive points of view as to modifications and changes in this legislation.

Mr. PRATER. We made them because we think they would be more workable in our case.

Senator METCALF. Thank you for your statement.

Mr. PRATER. Thank you.

Senator METCALF. Our next witness is Mr. Richard Bowers. Mr. Bowers? We will pass him over for the time. Mr. Edward K. Davison.

STATEMENT OF EDWARD K. DAVISON, DAVISON SAND & GRAVEL CO., NEW KENSINGTON, PA.

Mr. DAVISON. Mr. Chairman, I have here publications which we have already submitted for the use of the committee.

Senator METCALF. Thank you.

Mr. DAVISON. They have been mailed also to the offices of the members of the committee and perhaps you might want to hold these up there while I testify.

Senator METCALF. Please. We will be delighted to have them.

Mr. DAVISON. As I say, these are already in your individual offices also.

Senator METCALF. Just a moment. I wish to make an announcement. Mr. Davison will be the last witness this morning. Immediately after recess we will get to the representatives of the Idaho phosphate industry and we will recess until 1:30.

Go ahead, Mr. Davison.

Mr. DAVISON. Thank you, sir. Mr. Chairman, Senator Jordan, I am Edward K. Davison, President of Davison Sand and Gravel Co. of New Kensington, Pa. I appear on behalf of the National Sand and Gravel Association, whose member companies produce the major portion of commercial production in the United States. Our testimony is directed to the proposed Surface Mining Reclamation Act of 1968, S. 3132, introduced by Senator Jackson.

Sand and gravel, along with crushed stone and blast furnace slag, are the major constitutents in portland cement, concrete mixtures, asphaltic mixtures, base courses and surface treatments for all types of highways, engineering structures, buildings and homes.

Since 1954 sand and gravel has been the largest of the mining industries in terms of tons produced. That tonnage is now very close to 1 billion tons a year, of which about 75 percent is produced by commercial operations.

These construction aggregates are low-value heavy-loading commodities which must be produced as near as possible to the sites of major construction activity. It is vital to the economics of our expanding urban areas and the construction of the many required structural facilities of these areas that hauling costs be kept low.

This has resulted over the years in the concentration of sources of production in and near urban areas. This has further resulted, particularly since World War II, in the preemption of sand- and gravel-bearing reserve lands by other uses and in widespread restrictions by local authorities which preclude the mining of reserve lands even though they may have been owned for years by producers.

The New York City, Los Angeles, Detroit, Denver, and Washington metropolitan areas are among some of the most critical areas in which preemption and restrictions are now or soon will be causing substantial increases in construction costs.

In 1955 a study by the National Sand & Gravel Association indicated that over half of the operations in a significant sample were carried on in areas subject to regulation by zoning authorities and we have reason to believe that this situation may now apply to two-thirds or more of all operations.

Some of the leading member companies of our association have carried on reclamation programs since the early 1920's. A brochure on one of the finest of such endeavors by a leading producer is among the publications which we have submitted and also sent to your offices and which you have at hand there now.

In 1955 the association, recognizing the growing seriousness of the situation, embarked on a reclamation research program, which still continues to convince both our industry and the land-planning profession that the public interest requires:

1. The orderly, economic, and full development of sand and gravel resources, and

2. The restoration of worked-out lands to afteruses amenable and suitable to the surrounding environment.

We have promoted, we believe with significant success, the multiple-use concept of land planning—development of the mineral values followed by return of the land to uses such as recreation, residential, institutional, industrial, and commercial sites, and waste disposal sites.

In connection with waste disposal, it is now widely recognized that this is becoming a critical element of environmental control. It is possible to get three uses out of certain sand and gravel operations—extraction, filling with solid waste materials, and building sites or recreation sites.

One of the major efforts of the program of the National Sand & Gravel Association has been the sponsorship of research at the graduate level by the Department of Landscape Architecture of the University of Illinois, under the very able chairmanship of Prof. William G. Carnes.

The first three completed research reports are part of the material which we have submitted to your committee. One of them, although

done by a graduate student, received a professional award from the American Society of Landscape Architects, and drew praise from Mr. Laurance S. Rockefeller when he stated:

> I was interested to learn of this leadership effort by industry and look forward to sharing it with my associates on the Citizens Advisory Committee on Recreation and Natural Beauty.

A fourth research report in the University of Illinois project will be published soon. The fifth is to be initiated this September, with a publication deadline of June 1970. Entitled "The Recreation Potential of Sand and Gravel Sites," it has drawn the interest of the U.S. Department of the Interior and the Soil Conservation Service of the U.S. Department of Agriculture.

We are pleased to say that Mr. L. Boyd Finch, staff assistant to the Assistant Secretary for Mineral Resources, Department of the Interior, and Dr. D. M. Whitt, Director of Plant Sciences Division of the Soil Conservation Service, both of whom are in the room this morning, have agreed to serve on the National Sand & Gravel Association's Advisory Committee to provide guidance and technical consultation on this particular project.

Another of the exhibits submitted for the record is a book entitled "Site Utilization and Rehabilitation Practices for Sand and Gravel Operations." It was prepared as a handbook and guide for the industry and for landscape architects by Mr. Kenneth L. Schellie of Schellie Associates, a division of Clyde E. Williams & Associates Inc., of Indianapolis, Ind. Mr. Schellie has been planning and landscape consultant to our association and to a number of member companies over the past 7 years. This publication was the recipient of a Merit Award from the Soil Conservation Society of America.

Another phase of the education and research program of the National Sand & Gravel Association is a forthcoming publication jointly sponsored by the association and the Soil Conservation Service of the U.S. Department of Agriculture and funded by the association. It will cover the following subject matter:

(*a*) Interpretations implementation of soil survey map data in reference to prospecting and exploration of deposits; and

(*b*) An explanation of the soil survey information and how it can assist producers in the revegetation and reclamation of operations.

I have risked, Mr. Chairman, being unduly lengthy in these matters because I want to emphasize for the record that the restoration of worked-out sand and gravel lands to suitable afteruses has found wide acceptance and performance in the sand and gravel industry.

For example, our association's most recent land-use survey drew responses covering 1965 operations from companies which produced about 25 percent of commercial tonnage at that time. The acreage reported by the respondents as being returned to useful purposes was 52 percent of reported worked-out acreage for the year concerned.

Because of time elements involved in operations and planned restorations of varying types, we feel that a percentage figure of this nature is to be regarded more as an indicator of a trend rather than an exact number.

Further, three land-use surveys and a strata depth survey which we have conducted lead us to believe that the acreage disturbed by sand and gravel operations as reported in Interior's publication, "Surface

Mining and Our Environment" may be two or more times than that calculated by the association.

Whatever the case may be, the National Sand & Gravel Association and a great majority of responsible operators in this industry are committed, both of their own volition and by local statutes and regulations, and in some cases State law, to planned afteruses of sand and gravel lands.

With the widespread and still growing extent of local government and State government regulation of land use in sand and gravel extraction and with the growing acceptance of good multiple-use planning by the industry, we respectfully submit that Federal intrusion into this area will serve only to complicate matters.

There could be a real possibility under Federal law of stifling flexibility and imagination in planning afteruses if an attempt is made to set up guides and criteria burdened with specific numbers and dimensions. We particularly object to the possibility of coming under two, and in certain circumstances even three, sets of regulations and bonding requirements.

If the Congress does see fit to pass such a law, we suggest that it can be improved and made more workable by incorporating certain amendments which we are offering.

First, we suggest that the Federal administering agency and the States be empowered to decline jurisdiction where appropriate studies and hearings establish that reclamation is being adequately regulated by local jurisdictions or is being accomplished in practice.

We presently have no specific wording to suggest on this score but would hope to be granted an opportunity to discuss it with the committee's staff. We would welcome the opportunity to bring into such discussion personnel from the Department of the Interior and the Department of Agriculture with whom we have had excellent cooperation in the past.

For our other proposed amendments we have drafted suggested language which I shall touch on only briefly here. They are attached I believe to the statement in your hands.

Briefly we are offering:

1. Clarification of section 2(e), the definitions section, to make it clear that the act applies only to lands mined subsequent to enactment.

2. Several changes in section 7, which sets forth the required features for State plans:

a. That the plan shall recognize the element of protecting the availability of mineral reserves in fulfillment of the congressional finding expressed in section 3(a) on the economic significance of mineral extraction by surface mining.

b. That modification of reclamation plans as deemed desirable because of unanticipated geologic, economic or land-use factors be permitted.

c. That operation and reclamation shall be subject to only one source of regulatory authority.

3. A section to create a Federal Surface Mining Board of Review which would hold hearings on disapproved State plans and individual aggrievances of mining producers.

4. A section providing for judicial review so that any final order issued by the suggested Board of Review would be subject to judicial

review by the U.S. Court of Appeals for the circuit in which the State or mine affected is located.

These two sections on a Board of Review and judicial review follow similar provisions in the Federal Mine Safety Act.

For the past 13 years it has been one of the foremost policies of the National Sand and Gravel Association, under the direction of its board of directors, to sponsor and fund an education and research program in the cause of sound land-use.

I have discussed part of this program here and members of this committee have been furnished with some of the products of the program. It is from this background that I express the hope that our testimony reflects a high degree of constructive criticism.

Thank you, sir.

(The suggested amendments referred to follow:)

THE NATIONAL SAND AND GRAVEL ASSOCIATION RECOMMENDS THE FOLLOWING SUGGESTED LANGUAGE FOR THE PURPOSE OF AMENDING S. 3132

Amend Sec. 2(e) by deleting the word "concluded" on page 2, line 19, and substituting therefor the word "conducted."

Amend Sec. 4 by deleting the words "and the surface mined area thereof" on page 4, lines 16 and 17.

Amend Sec. 7(a)(1) by deleting the word "and" under subsection (F), and by adding subsection (G) on page 9, line 6 as follows: "(G) provide that any surface mining operation and the reclamation of surface mined areas shall be subject to not more than one source of regulatory authority."

Amend Sec. 7(a)(1)(A) by eliminating the semi-colon after the word "Environment" on page 7, line 18, and adding the following words: "and preserve and protect the availability of mining resources for the present and future;"

Amend Sec. 7(a)(1)(B) by adding the following words after the word "plan" on page 7, line 19: ", either written or graphic,"

Amend Sec. 7(a)(1)(B) by adding the following words after the semi-colon on page 7, line 24: "provided that modifications of such mining plans may be filed with, and approved by, the state agency, from time to time, when such modifications are commensurate with the purposes of this Act;"

Amend Sec. 7(a)(1)(C) by eliminating the words "relating specifically" on page 8, lines 1 and 2, and substituting therefor "where applicable"

Amend Sec. 7(a)(1)(D) by adding the following words after the semi-colon on page 8, line 15: "provided that such reclamation plans may be modified or changed from time to time to reflect discovery of unanticipated geological, economic or other conditions;"

Amend Sec. 7(a)(1)(F) by deleting the words "criminal and" on page 8, line 22.

New Sec. 7(c) "(c) In the event that the Secretary does not approve a plan submitted by a state in accordance with this section, or in the event of the withdrawal of the Secretary's approval in accordance with subsection (b) above, such state may appeal the Secretary's decision to the Federal Surface Mining Reclamation Board of Review, in accordance with Sec. 13 and 14 of this Act."

New Sec. 8(f) "(f) A mine operator aggrieved by any decision of the Secretary made pursuant to this section, shall be entitled to review of the Federal Surface Mining Reclamation Board of Review in accordance with Sec. 13 and 14 of this Act."

SEC. 13(a) An agency is hereby created to be known as the Federal Surface Mining Reclamation Board of Review, which shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) The terms of office of members of the Board shall be five years, except that the terms of office of the members first appointed shall commence on the effective date of this section and shall expire one at the end of one year, one at the end of two years, one at the end of three years, one at the end of four years and one at the end of five years, as designated by the President at the time of appointment. A member appointed to fill a vacancy caused by the death, resignation, or removal of a member prior to the expiration of the term for which he was

appointed shall be appointed only for the remainder of such unexpired term. The members of the Board may be removed by the President for inefficiency. neglect of duty, or malfeasance in office.

(c) Each member of the Board shall be compensated at the rate of $75 for each day of actual service (including each day he is traveling on official business) and shall, notwithstanding the Travel Expense Act of 1949, be fully reimbursed for traveling, subsistence, and other related expenses. The Board, at all times, shall consist of two persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of surface mine operators, two persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of conservation interests, and one person, who shall be Chairman of the Board, who shall be a graduate engineer, forester, landscape architect, or attorney, with experience in the surface mining industry, and who shall not, within one year of his appointment as a member of the Board, have had a pecuniary interest in, or have been regularly employed or engaged in, or have been an officer or employee of the Department of the Interior.

(d) The principal office of the Board shall be in the District of Columbia. Whenever the Board deems that the convenience of the public or of the parties may be promoted, or delay or expenses may be minimized, it may hold hearings or conduct other proceedings at any other place. The Board shall have an official seal which shall be judicially noticed and which shall be preserved in the custody of the secretary of the Board.

(e) The Board shall, without regard to the civil service laws, appoint and prescribe the duties of a secretary of the Board and such legal counsel as it deems necessary. Subject to the civil service laws, the Board shall appoint such other employees as it deems necessary in exercising its powers and duties. The compensation of all employees appointed by the Board shall be fixed in accordance with the Classification Act of 1949, as amended.

(f) Three members of the Board shall constitute a quorum, and official actions of the Board shall be taken only on the affirmative vote of at least three members; but a special panel composed of one or more members, upon order of the Board, shall conduct any hearing provided for in section 14 and submit the transcript of such hearing to the entire Board for its action thereon. Every official act of the Board shall be entered of record, and its hearings and records thereof shall be open to the public.

(g) The Board is authorized to make such rules as are necessary for the orderly transaction of its proceedings, which shall include requirements for adequate notice of hearings to all parties.

(h) Any member of the Board may sign and issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and administer oaths. Witnesses summoned before the Board shall be paid the same fees and mileage that are paid witnesses in the courts of the United States.

(i) The Board may order testimony to be taken by deposition in any proceeding pending before it, at any stage of such proceeding. Reasonable notice must first be given in writing by the party or his attorney proposing to take such deposition to the opposite party or his attorney of record, which notice shall state the name of the witness and the time and place of the taking of his deposition. Any person may be compelled to appear and depose, and to produce books, papers, or documents, in the same manner as witnesses may be compelled to appear and testify and produce like documentary evidence before the Board, as provided in subsection (h). Witnesses whose depositions are taken under this subsection, and the persons taking such deposition shall be entitled to the same fees as are paid for like services in the courts of the United States.

(j) In the case of contumacy by, or refusal to obey a subpoena served upon, any person under this section, the Federal district court for any district in which such person is found or resides or transacts business, upon application by the United States, and after notice to such person to appear and give testimony before the Board or to appear and produce documents before the Board, or both; and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(k) The Board shall submit annually to the Congress as soon as practicable after the beginning of each regular session, a full report of its activities during the preceding calendar year. Such report shall include, either in summary or detailed form, information regarding the cases heard by it and the disposition of each.

"REVIEW BY BOARD

SEC. 14. (a) A state or an operator notified of an order of the Secretary made pursuant to Sec. 7 or Sec. 8 may apply to the Federal Surface Mining Reclamation Board of Review for annulment or revision of such order.

(b) The state or operator shall be designated as the applicant in such proceeding, and the application shall recite the order complained of and other facts sufficient to advise the Board of the nature of the proceeding. The application may allege: the Secretary's failure to approve a state plan, or his withdrawal of such approval, is arbitrary, capricious, or unreasonable within the intent and spirit of Sec. 7 of this Act; that the state plan submitted to the Secretary substantially complies with the provision of Sec. 7 and should be approved; that the state, in administering a plan previously approved by the Secretary, has complied substantially with it and has enforced it adequately, and a revision of the state's previously approved plan is not appropriate or necessary to effectuate the purposes of this Act; that denial or revocation of a permit made by the Secretary pursuant to Sec. 8 is arbitrary, capricious, or unreasonable; or that the action of the Secretary in denying or revoking such permit is not supported by a failure of the applicant to comply with the spirit and intent of this Act or the regulations issued by the Secretary pursuant to Sec. 8. The Secretary shall be the respondent in such proceeding, and the applicant shall send a copy of such application by registered mail or by certified mail to the Secretary at Washington, District of Columbia.

(c) Immediately upon the filing of such an application the Board shall fix the time for a prompt hearing thereof.

(d) Pending such hearing the applicant may file with the Board a written request that the Board grant such temporary relief from such order as the Board may deem just and proper. Such temporary relief may be granted by the Board only after a hearing by the Board at which both the applicant and the respondent were afforded an opportunity to be heard, and only if respondent was given ample notice of the filing of applicant's request and of the time and place of the hearing thereon as fixed by the Board.

(e) The Board shall not be bound by any previous findings of fact by the respondent. Evidence relating to the action complained of and relating to the questions raised by the allegations of the pleadings or other questions pertinent in the proceeding may be offered by both parties to the proceeding. If the respondent claims that the action complained of is substantially in compliance with Sec. 7 or Sec. 8 of this Act, as the case may be, the burden of proving such claim shall be upon the respondent, and the respondent shall present his evidence first to prove such claim.

(f) If the Board finds that the allegations of the applicant, as described in Sec. 14(b) are correct, the Board shall make an order, consistent with its findings, revising or annulling the act of the respondent under review, or shall order the respondent to take action in accordance with its findings. If the Board finds that the allegations of the applicant are not correct, the Board shall make an order denying such application.

(g) Each finding and order made by the Board shall be in writing. It shall show the date on which it is made, and shall bear the signatures of the members of the Board who concur therein. Upon making a finding and order the Board shall cause a true copy thereof to be sent by registered mail or by certified mail to all parties or their attorneys of record. The Board shall cause each such finding and order to be entered on its official record, together with any written opinion prepared by any members in support of, or dissenting from, any such finding or order.

(h) In view of the urgent need for prompt decision of matters submitted to the Board under this section, all action which the Board is required to take under this section shall be taken as rapidly as practicable, consistent with adequate consideration of the issues involved."

"JUDICIAL REVIEW

SEC. 15. (a) Any final order issued by the Board under Section 14: shall be subject to judicial review by the United States court of appeals for the circuit in which the state or mine affected is located, upon the filing in such court of a notice of appeal by the Secretary, or the state or operator aggrieved by such final order, within thirty days from the date of the making of such final order.

(b) The party making such appeal shall forthwith send a copy of such notice

of appeal, by registered mail or by certified mail, to the other party and to the Board. Upon receipt of such copy of a notice of appeal the Board shall promptly certify and file in such court a complete transcript of the record upon which the order complained of was made. The costs of such transcript shall be paid by the party making the appeal.

(c) The court shall hear such appeal on the record made before the Board, and shall permit argument, oral or written or both, by both parties. The court shall permit such pleadings in addition to the pleadings before the Board, as it deems to be required or as provided for in the Rules of Civil Procedure governing appeals in such court.

(d) Upon such conditions as may be required and to the extent necessary to prevent irreparable injury, the United States court of appeals may, after due notice to and hearing of the parties to the appeal, issue all necessary and appropriate process to postpone the effective date of the final order of the Board or to grant such other relief as may be appropriate pending final determination of the appeal.

(e) The United States court of appeals may affirm, annul, or revise the final order of the Board, or it may remand the proceeding to the Board for such further action as it directs. The findings of the Board as to facts, if supported by substantial evidence on the record considered as a whole, shall be conclusive.

(f) The decision of a United States court of appeals on an appeal from the Board shall be final, subject only to review by the Supreme Court as provided in section 1254 of title 28 of the United States Code."

Sections 13 through 16 of the present Act (S. 3132) should be renumbered respectively:

13 becomes 16;
14 becomes 17;
15 becomes 18, and
16 becomes 19.

Senator METCALF. Thank you very much, Mr. Davison. Senator Jordan?

Senator JORDAN. Thank you, Mr. Davison. I expect your industry is by far the largest in point of location of sites throughout the country. Every community has a sand and gravel operation.

Mr. DAVISON. Yes, sir.

Senator JORDAN. You are more widespread than any other industries that have had witnesses that have appeared before us. I am pleased to see that you are doing some work in reclamation and research and retsoration on your own behalf.

I just hope that it continues because there is so much to be done and such a broad area that requires work to be done, spread out as you are in many communities in every State.

I have no questions, Mr. Chairman.

Senator METCALF. I certainly concur, Mr. Davison, with Senator Jordan's commendation. These are most impressive documents.

Mr. DAVISON. Thank you, sir.

Senator METCALF. The work that you have done demonstrates imagination and it is heartening to know that that is being done by your industry.

I also thank you for a rather comprehensive suggestion for amendments in the event this legislation is passed. I think that most of us in the Congress are committed to the principle of judicial review and we write it into bills that are sent up from the administration without it.

I will confess that I was one of the authors of the Mine Safety Act and we put in that Review Board. Just now I think we should go into an intervening board which would be necessary in some of these cases and I do want to ask you a question. I wonder if the initial judicial

review should not take place in the local district court rather than in the court of appeals?

Mr. DAVISON. I would concur that this is probably more convenient for the operators.

Senator METCALF. It isn't such a problem for many of the people. You go up into New York City and the U.S. district court is on one side of the street and the circut court of appeals is on the other, but in Idaho and Montana it is a lot easier to go over to Butte or Helena or down to Boise than it is to go to San Francisco and we very seldom have the court sitting even as far north as Seattle.

So that in most of these cases the law questions can be decided at the local level. I am convinced that there should be judicial review but I am thinking of probably local review.

Mr. DAVISON. We have no particular feeling on it. We simply followed the Mine Safety Act in that regard.

Senator METCALF. Thank you very much for a very helpful statement and my commendation to your industry.

Mr. DAVISON. Thank you.

Senator METCALF. This will be the last witness this morning and the committee will reconvene after the recess at 1:30. The first witnesses are Mr. Emigh, Mr. Power, and Mr. Olsen, who will be followed by Mr. Leirfallom and then we are going to move Mr. Zeigler at the request of Senator McGovern up to be the third witness.

(Whereupon, at 12:05 p.m., the committee recessed to reconvene at 1:30 p.m., the same day.)

AFTER RECESS

(The committee reconvened at 1:30 p.m., Senator Lee Metcalf presiding.)

Senator METCALF. The committee will be in order.

I had hoped that our two distinguished colleagues from Idaho, who are members of the committee, would be here to introduce our next speaker. Senator Church had asked me to call him when Dr. Emigh, Mr. Power, and Mr. Olsen came on and Senator Jordan, I know, wanted to be here.

However, I regret that they are not here. I know that they are detained on business. I know that both Senator Church and Senator Jordan had a meeting scheduled because they were unable to attend the meeting of the Northwest rivers and harbors group, which I just left.

I am pleased to introduce and old friend, a friend who appeared at hearings before the Interior Committee of the House when I was a member over there and who has appeared several times since I have been in the Senate.

Dr. Emigh, and your group, thank you very much. Senator Church is here now.

Senator CHURCH. Thank you, Mr. Chairman. I am sorry to be delayed.

Senator METCALF. You are recognized.

Senator CHURCH. I just wanted to say that, because I have been chairing another committee hearing, which is occurring simultaneously, one of the problems we have here in the Senate, I haven't been

able to attend this hearing up until now, but I do look forward to this testimony.

The phosphate industry is of great importance to the economy of our State and we want to make certain that any regulation of the industry is realistic, both in terms of protecting the public interest in a proper way and permitting the industry to mine without unreasonable impediment. I think that the testimony of these gentlemen will be very helpful to the committee in placing this matter in perspective and in giving us some guidelines as we consider the possibility of legislative action in that field.

Senator METCALF. Senator Jordan.

Senator JORDAN. Thank you, Mr. Chairman. May I add that these gentlemen have waited patiently. They have been here every minute of the hearing since it started yesterday morning. I am glad we are getting to them and I know that their testimony will be very much worthwhile and a contribution to our record on this important matter.

Don Emigh, whom I have known for many, many years, is chairman of the Phosphate Lands Conference. Ott Power is with the Mineral Development Department of Food Machinery. Dennis Olsen is counsel for the Phosphate Lands Conference.

I understand, Mr. Chairman, they will appear as a panel and Dr. Don Emigh will lead off.

STATEMENT OF G. DONALD EMIGH, CHAIRMAN, PHOSPHATE LANDS CONFERENCE, ACCOMPANIED BY O. A. POWER, MINERAL DEVELOPMENT DEPARTMENT, FOOD MACHINERY & CHEMICAL CORP., AND DENNIS W. OLSON, COUNSEL FOR PHOSPHATE LANDS CONFERENCE

Mr. EMIGH. Thank you, Senators.

Mr. Chairman and members of the committee, my name is G. Donald Emigh. I appear as chairman of the Phosphate Lands Conference, an ad hoc group formed in 1966 and composed of western phosphate rock producers. These producers, by the way, are in the States of Utah, Montana, Idaho, and Wyoming.

With me for this presentation, being made on behalf of the Phosphate Lands Conference, are Mr. O. A. Power, on my left, representing another company in our conference, and Mr. Dennis M. Olsen, on my right, counsel for our conference. After a few brief opening remarks, I will call on Mr. Power and Mr. Olsen for additional, more detailed, comments.

Most of us engaged in mining western phosphate do so by surface mining methods. The vast majority of the western phosphate deposits are under the administration of the Department of the Interior and are available for development and production through leases from the Department of the Interior.

In May 1966, the Department of the Interior published in the Federal Register new proposed regulations covering federally leased phosphate deposits the purpose of which was to provide for mined land reclamation.

Those of us mining western phosphate were concerned over many provisions of these proposed regulations which, among other things, we felt went far beyond mined land reclamation.

Accordingly, the Phosphate Lands Conference was formed for the purpose of working with Interior to develop regulations to accomplish the objective of mined land reclamation without the onerous problems of Interior's proposals of May 1966, which, at least, we in the western phosphate industry see from our side.

Because we feel that the peculiarities of western phosphate mining and western phosphate deposits are of extreme importance in the consideration of S. 3132 and S. 3126, Mr. Power will devote the first portion of his comments to this subject.

In addition, he will comment on the past activities of the conference relative to mined land reclamation which form a further basis for our comments on the provisions of S. 3132 and S. 3126.

Mr. Olsen's comments will then be directed specifically to the provisions of S. 3132 and S. 3126 in the light of the background information provided by Mr. Power. Because we three are making a joint presentation, perhaps it might be in order for questions to be withheld until the three of us are finished; however, we would be very happy to answer questions at any time.

In closing my brief presentation to you, we of the Phosphate Lands Conference believe that no laws or regulations are needed to force mined land reclamation on western phosphate producers because these producers are already implementing this reclamation. We also believe that any such laws or regulations should only be adopted after the findings of the Public Land Law Review Commission are available.

Should it develop, however, that legislation is to be enacted at this time, then we hope that our constructive comments presented to you here will receive careful consideration.

Our next presentation is by Mr. O. A. Power, who will talk about, as I mentioned, the way our western phosphate physically occurs and the problems that it causes and then he will comment on the 2-year history of our Phosphate Lands Conference.

Senator METCALF. Thank you.

Mr. Power.

Mr. POWER. Dr. Emigh has touched briefly on the Phosphate Lands Conference. In my presentation I should like first to discuss the unique features of the western phosphate deposits. I will then briefly review the past activities of the Phosphate Lands Conference. Our comments on both these subjects provide the background for understanding our specific comments relative to S. 3126 and S. 3132.

UNIQUE CHARACTERISTICS OF WESTERN PHOSPHATE DEPOSITS

About 200 million years ago western phosphate was deposited from an inland sea stretching from the Gulf of Mexico northward into Montana. The phosphate was deposited in only a small area of that sea, and the deposition was related to the chemistry of the sea and its temperature.

At that time the phosphate was flat lying, as are all other phosphate deposits now being mined in the world with the possible exception of Russia.

After the sea evaporated, mother nature sprinkled hundreds of feet of other rocks on top of the phosphate for the next few million

years. Then came the great upheaval and the Rocky Mountains were born. Since all this disturbance came after the phosphate was deposited, the phosphate also was disturbed, resulting in tremendous faulting, folding, and erosion. Therefore, our mining problems are truly unique as illustrated in exhibit A submitted herewith.

To further illustrate I have drawn a typical cross section of the geology of the phosphate as it now occurs at the Gay Mine located 32 miles northeast of Pocatello, Idaho, a copy of which is submitted herewith as exhibit B. Western phosphate, because it is covered with more overburden than any other in the Western Hemisphere, is much more difficult and costly to drill. Furthermore, our overburden consists of hard rocks. Normally, around the world the overburden is a soft silica sand. Additionally, our topography is mountainous rather than flat. Some people think that we have mountains of phosphate and we just start digging. This is far from the truth. Fnding the economic ore body is difficult and costly.

This leads me to discuss our methods of exploration—finding the economic ore body. First, we walk or "jeep" the area. We hunt for marker beds—the rex chert above or the limestone below. We then prepare geologic maps putting all the geologic factors on paper.

Then we drill for information to add to that map. This means we drill holes miles apart pulling cores from beneath the surface. These core samples let the skilled geologist slowly build a geologic picture which then pinpoints the target area.

I would like to call your attention to the enlarged drawing on your left and I will explain this in a little detail. To give you some idea of the scale let's assume that this is perhaps 2 miles by 3 miles. In the Idaho phosphate the well's limestone is phosphatic. This is a phosphate bed.

In exhibit A, which you have, we saw originally that we had a flat deposit. Then came the Rocky Mountains and as a result we have all of this faulting and in many cases erosional channels which have taken away the phosphate and redeposited what we called the Salt Lake formation.

You have heard much discussion about Senate bill 3132 and the requirement for advance planning in exploration and mining. This is the reason that I have drawn this for you.

The phosphoria is generally soft and does not outcrop. It is covered by debris from the hills above. Therefore, we hunt for this bed below or this bed above which we call marker beds.

After finding these and suspecting the occurrence of phosphate we then apply for a lease from the Federal Government. We do not really know whether phosphate exists until we have trenched and drilled. In our drilling let's assume that we drill the hole here where the thickness of the chert is excessive.

This means that this is not economic. We would pull over this way trying to find the ore or if it were below the ore and drill into the well's formation, we then move up. If you will erase this cross section here from your mind for a moment I would like to point out that we will not find this same sort of structure back a quarter of mile or a half mile or a mile. It will be completely different.

Senator CHURCH. May I just ask at that point, it follows that, since the ore lays in different patterns, you cannot know where you are going to mine until you have drilled exploratory holes?

Mr. POWER. That is correct.

Senator CHURCH. And even after you have drilled the initial holes you don't have sufficient information at that point to plot out and plan for a general mining operation until you have gone ahead and drilled the other holes that confirm the location of the balance of the ore that will be involved in the total operation?

Mr. POWER. That is correct.

Senator CHURCH. Thank you.

Mr. POWER. Therefore, exploration is difficult and requires freedom of movement with each day's work dictating the next day's work. The first drill hole dictates the location of the second and so on.

The next step after exploration is development of the ore body—providing you have found ore. We now settle down to determine the number of tons of ore, the tons of overburden and the mining cost estimates.

Grade of ore is most important as this affects our plant operations. Mining methods and equipment are studied and alternate plans are prepared. But we still have, even at this point, unknown mining factors.

Mining is the next step. It is impossible to drill the entire property enough to set up a complete mining plan. So we take a panel—a small area usually less than 10 acres. We drill again in more detail, then remove the overburden and extract the ore. It is only at this point and in this panel within the mine that we know fairly well what is going to happen. Even then unexpected faults or folds can make us alter our plans.

Because of the geology I have just described the Phosphate Lands Conference contends that mining regulations must take into consideration the complexities of our mining conditions.

PAST ACTIVITIES OF THE PHOSPHATE LANDS CONFERENCE RELATIVE TO MINED LAND RECLAMATION

Let us now turn our attention to the past activities of the Phosphate Lands Conference relative to mined land reclamation. As has been mentioned, most of the western phosphate is on the public domain administered by the Department of the Interior.

On May 7, 1966, the western phosphate industry was shocked to see the Department of the Interior publish proposed regulations for the reclamation of federally owned phosphate lands which ignored the unique geologic conditions I have just described. It appeared that the authors had never been west and certainly were not skilled in mining.

These regulations were impractical and in the final analysis could have put the western phosphate industry out of business.

The western phosphate producers immediately banded together for the purpose of forming the Phosphate Lands Conference and to jointly ask for time to comment on the proposed regulations.

Within 6 months we prepared and submitted to the Department of the Interior comments illustrating the problems and failings of the proposed regulations together with proposed regulations which we felt achieved the desired results of mined land reclamation without the unnecessary interference of the Federal Government in our methods of prospecting and mining.

We felt that the Government's proposed regulations, under the guise of reclamation, unnecessarily took away freedom of action as normally enjoyed under our free enterprise system. So, we were not arguing with the objectives of mined land reclamation—it was the proposed method to which we objected.

In December of 1966 when the conference submitted its proposed regulations, a copy of which is submitted as exhibit D, the Department promised that it would study the proposal and comment back probably in January of 1967.

There was never any official response except that on July 20, 1967, we were shocked again to find a new and even more restrictive set of proposed regulations published by the Department of the Interior which completely ignored our prior comments and our proposed regulations.

Once more in December of 1967 we journeyed to Washington to again meet with the Department of the Interior. Our regulations were resubmitted, together with our explanation of the problems posed by the July 20 regulations, and we have heard nothing further.

Our second meeting, incidentally, was largely with a new group of people who apparently had no knowledge of our prior discussions with, and presentations to, the Department of the Interior.

Since we are now discussing Senate bills 3126 and 3132, it is perhaps not timely to review for you the Department of the Interior's proposed regulations. However, our comments on the Department of the Interior's proposed regulations of July 20, 1967, are set forth in exhibit E, which is submitted herewith.

The significant point to make is that we believe that we have in good faith attempted to work out solutions to the problem of achieving mined land reclamation, but that our good faith efforts and our comments and proposals have been largely ignored by the Department of the Interior. That we should be so ignored is of great concern to us. In such circumstances we can only look to the Congress for assistance.

I am sure you will find that we miners are good citizens. We don't go around tearing up the earth for the sheer joy of being destructive. We believe, and I am sure you share the belief, that the products of mining have made significant contributions to our society. The car you drive, the television set you enjoy, yes, even the fishhook used by the sportsman, all are products of mining.

Mining is a difficult profession. The good Lord gave us our minerals, but he failed to include a set of instructions with each property. All proposed regulations to date assume that in advance of exploration and mining the entire leased acreage, we can predetermine—

1. The precise location of the proposed mining operation.
2. The area where the overburden will be stored.
3. The amount of surface that will be disturbed.
4. The nature of the excavation.
5. The size of the piles of removed overburden and their location and design.

All of this for the entire leased area. Now, we can do this on each panel within the mine, not the entire mine. We must make our plans step by step. And, in our proposed regulations we say exactly that.

But the Department of the Interior wants more. They want to tell us where to drill, where to build roads, the size and types of equipment to be used for exploration, development, and extractive opera-

tions, and on and on. Our competitive way of life just won't permit us to have a partner with full and final authority unless he shares the economic risks with us.

We judge our equipment, our facilities—all of our activities—on dollars spent and whether or not we can stay in business. So it is not whether we will reclaim or beautify. We will. We have said so. It is not whether; it is how.

So, please, will someone who doesn't want to take away our rights, read and understand or, at least, acknowledge our proposed regulations.

The difficulties of mining and reclamation go hand in hand. Restoring the land in our case is much more difficult than restoring the land on a flat deposit. We don't have rivers adjacent to our mines. Our average rainfall is very low and the water in the summertime is at a premium in the mine areas. We don't pollute waters. We don't form acid waters—phosphate and other components of the phosphate are not soluble in water.

Last, one must consider the alternate uses of our desert lands and what those uses contribute to our States and Nation. For the most part, we are located in isolated areas away from the eyes of the tourist. No one can say the mining areas are scenic, or at least few can call a sagebrush hill scenic. Since we have been reseeding for 2 years, we do not destroy food for deer. The less than 2,000 acres western phosphate mining has disturbed over its entire history would not feed 100 head of deer.

The western phosphate industry is important to our Nation and particularly important to the economy of our Western States. We submit herewith, as exhibit F, a report which illustrates the economic significance of the western phosphate industry. As pointed out in the brochure, phosphate has many uses from fertilizers to pharmaceuticals.

We have contributed millions of dollars of cash flow to the people of our States in the form of payrolls, taxes, supplies, purchase of power and railroad freight, et cetera.

In 1967 our anual payroll was $122 million, our plant investment directly related to western phosphate was in excess of $654 million over the Nation, and out of this we have disturbed in the past 20 years, 1,781 acres, all of which will eventually be reseeded.

We will cooperate with our Government in its efforts to beautify America. We simply want to keep the freedoms necessary for us to survive in a competitive industry.

Senator METCALF. May I interrupt at this time before Mr. Olsen starts? Mr. L. Boyd Finch is in the audience and representing the Secretary of the Interior. I wonder if, Mr. Finch, you would not see that these regulations are acknowledged and if you choose, the record will be open for you to make the necessary comments on them. I feel that the phosphate industry is entitled to an acknowledgement and some feeling on the part of the Department of the Interior as far as the regulations are concerned.

Will you relay that suggestion to the Secretary?

Mr. FINCH. I will, Mr. Chairman. I would add that I think it has been acknowledged in official conferences with the representatives present here today.

Senator METCALF. Will you make whatever acknowledgement has been made a part of the record?

Senator CHURCH. May I suggest, Mr. Chairman, that it would be helpful if we were to go a step further, with your permission. It seems to me that a very strong case has been made here by the western industry, the burden of which is that the original regulations which were proposed by the Department simply failed to take into account the realities of phosphate mining in the West. There seems to be some grounds for believing that the regulations were drafted with the situation in Florida and in other places in mind where the mining problems are entirely different. This is what occasioned the alarm in the western industry. A case has been stated here showing that the proposed regulations by the Department simply didn't fit the conditions of mining in the West.

So I think that it is not only necessary that this case be acknowledged by the Department, but I think it is necessary for the Department to reply point by point to the case that has been made, in specifics, so that this committee will have an opportunity to weigh the arguments of the western industry against whatever counterargument in fact exists point by point. That will give this committee the basis for making an appraisal of the situation and I certainly think the industry is entitled to a rejoinder on that basis when they make their case in this detail.

Senator METCALF. I hope that Mr. Finch will relay that to the Secretary.

Mr. FINCH. I shall.

(The exhibits previously referred to follow:)

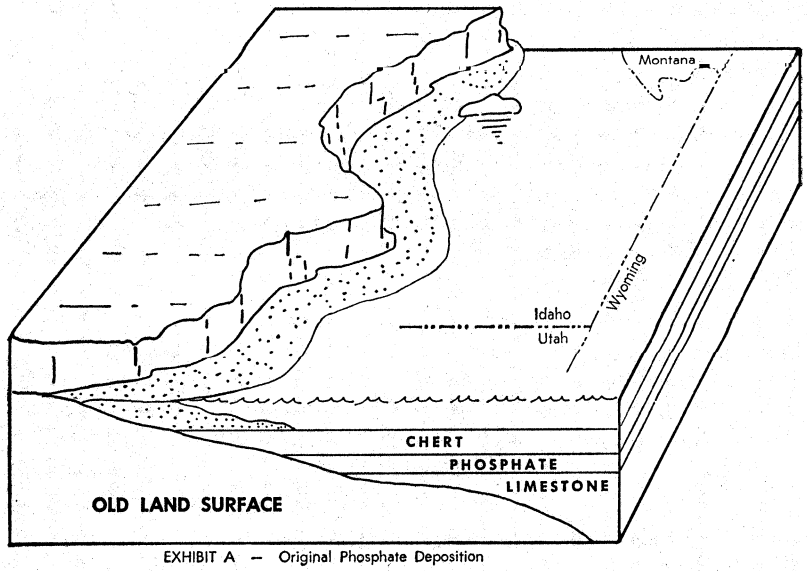


EXHIBIT A — Original Phosphate Deposition

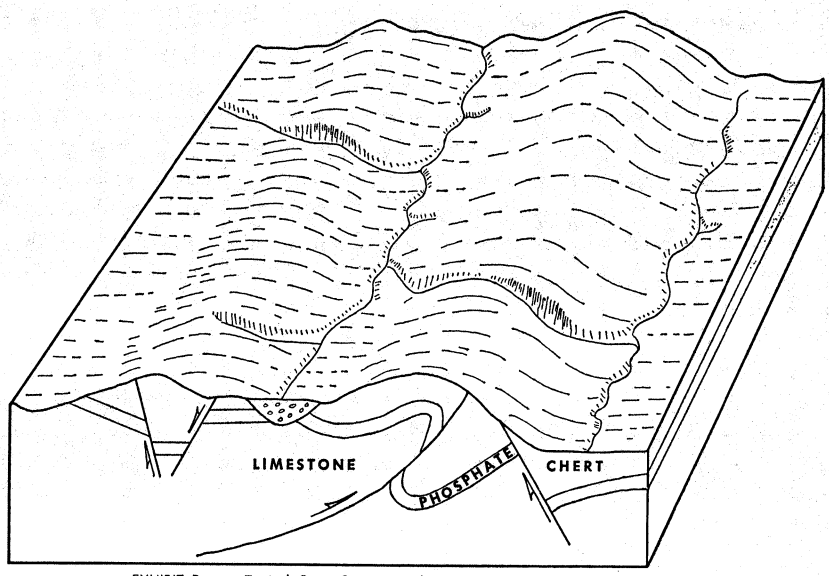


EXHIBIT B — Typical Cross Section at the Gay Mine

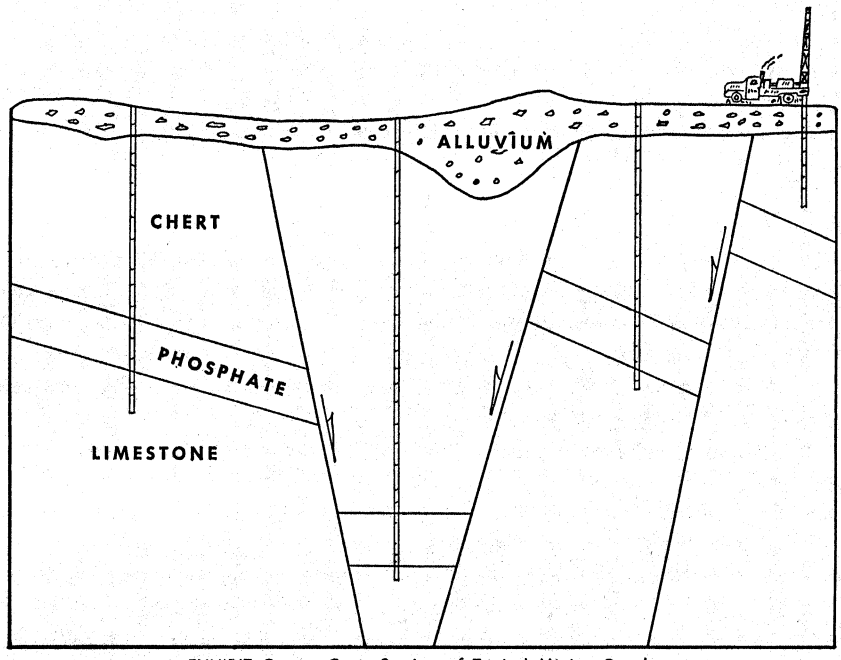


EXHIBIT C — Cross Section of Typical Mining Panel

EXHIBIT D—PROPOSED PHOSPHATE REGULATIONS, SUBMITTED BY THE PHOSPHATE LANDS CONFERENCE

SECTION 3160.0–5 DEFINITIONS

As used in this part:

(a) "Authorized officer" means the manager of the Land Office for the land district in which the lands of a given lease or permit are located.

(b) "Cross country travel" means vehicular travel on lease or permit premises other than on a road.

(c) "Director" means the Director of the Bureau of Land Management, the Associate Director or an Assistant Director.

(d) "Development drill holes" means holes drilled on lease premises to determine the attitude, extent and phosphatic content of phosphate ore bodies excluding such holes drilled on a phosphate mine panel in conjunction with the extraction of phosphate after mining operations have commenced on such panel.

(e) "Development operations" means the activities performed on lease premises to determine the attitude, extent and phosphatic content of phosphate ore bodies excluding such activities conducted on a phosphate mine panel in conjunction with the extraction of phosphate after mining operations have commenced on such panel.

(f) "Development roads" means roads constructed on lease premises to determine the attitude, extent and phosphatic content of phosphate ore bodies excluding such roads constructed on a phosphate mine panel in conjunction with the extraction of phosphate after mining operations have been commenced on such panel.

(g) "Development trenches" means trenches excavated on lease premises to determine the attitude, extent and phosphatic content of phosphate ore bodies excluding such trenches excavated on a phosphate mine panel in conjunction with the extraction of phosphate after mining operations have commenced on such panel.

(h) "Lease premises" means lands included in a phosphate lease issued pursuant to these regulations.

(i) "Mine" means an area of land included in a lease or leases issued pursuant to these regulations consisting of one or more phosphate mine panels from which phophate is extracted including the pits, overburden disposal areas, phosphate ore stockpiles and roads involved in the extraction of phosphate exclusive of prospecting and development roads and trenches and other excavations constructed for the purpose of locating phosphate ore bodies and determining the attitude, extent and phosphatic content and mineability thereof. The boundaries of a mine shall be determined by the Lessee in its discretion.

(j) "Mined area" means surface of land from which overburden or phosphatic material has been removed other than by drilling.

(k) "Mining operations" means the activities performed on lease premises in the extraction of phosphate, including the excavating of pits, removal of phosphate, disposal of overburden, and the construction of haulage roads but exclusive of development roads, development trenches, drill holes and other development operations.

(l) "Off-site" means the land area on lease or permit premises exclusive of overburden disposal areas, mined areas, phosphate ore stockpiles and roads.

(m) "On-site" means the land area on lease or permit premises included in overburden disposal areas, mined areas, phosphate ore stockpiles and roads.

(n) "Overburden" means material extracted by Lessee which is not a part of the material ultimately removed from the lease premises and marketed by Lessee, exclusive of phosphate ore stockpiles.

(o) "Overburden disposal area" means land surface on lease premises upon which overburden is piled or planned to be piled.

(p) "Prospecting drill holes" means holes drilled on permit premises to locate phosphate ore bodies and to determine the workability thereof.

(q) "Prospecting operations" means activities performed on permit premises to locate phosphate ore bodies and to determine the workability thereof.

(r) "Prospecting roads" means roads constructed on permit premises to locate phosphate ore bodies and to determine the workability thereof.

(s) "Prospecting trenches" means trenches constructed on permit premises to locate phosphate ore bodies and to determine the workability thereof.

(t) "Peak" means a projecting point of overburden.

(u) "Permit premises" means lands included in a phosphate prospecting permit issued pursuant to these regulations.

(v) "Phosphate mine panel" means that portion of a mine designated by Lessee as a panel of a mine on the map submitted pursuant to Section 3161.4–2 herein.

(w) "Phosphate ore stockpile" means phosphatic materials extracted during mining operations and retained on the lease premises for future rather than immediate use.

(x) "Pit" means an excavation created or to be created by the extraction of phosphate or overburden during mining operations.

(y) "Ridge" means a lengthened elevation of overburden.

(z) "Road" means a way constructed on the lease or permit premises for the passage of vehicles.

(aa) "Secretary" means the Secretary of the Interior or his authorized representative.

SECTION 3161.4–1 GENERAL

Objectives. It is the policy of the Department to encourage the exploration and development of phosphate deposits of the public lands and at the same time to minimize damages to other resources and aesthetic values, both on-site and off-site, of the lands containing such deposits and all adjacent lands. In furtherance of this policy, each Lessee and Permittee under any new lease or permit hereafter entered into will be required to conduct prospecting, development and mining operations on the lease or permit premises, as the case may be, in accordance with the multiple use and conservation practices required by Sections 3161.4–5, 3161.4–6, 3161.4–7, 3161.4–8 and 3161.4–9 of these regulations.

SECTION 3161.4–2 SUBMISSIONS BY LESSEE PRIOR TO MINING OPERATIONS: MAPS, DIAGRAMS, CONSERVATION AND RECLAMATION PLANS

(a) Any Lessee desiring to extract phosphate from lands hereafter leased pursuant to these regulations, shall submit to the authorized officer prior to commencing mining operations on a given phosphate mine panel which Lessee desires to extract phosphate the following:

(1) A map of the phosphate mine panel on which Lessee desires to conduct mining operations which sets forth with respect to said panel the following:

(i) The location of existing roads and anticipated access and main haulage roads planned to be constructed in conducting the mining operations.

(ii) The approximate boundaries of the lands to be utilized in the process of extracting the phosphate including overburden disposal areas, phosphate ore stockpile areas and in the case of surface mining, the area from which the phosphate and overburden is to be removed.

(iii) The approximate location and, if known, the names of all streams, creeks, or bodies of water within the area where mining operations shall take place.

(iv) The approximate location of buildings and utility lines within the area where mining operations shall take place.

(v) The drainage adjacent to the area where the surface is being utilized by mining operations.

(2) Diagrams showing the planned location and design of pits, phosphate ore stockpiles and overburden piles which will be constructed in the course of the mining operations on said panel.

(3) A conservation and reclamation plan setting forth the action which the Lessee intends to take to comply with the provisions of Sections 3161.4–5 and 3161.4–6 herein as to the mining operations conducted on such phosphate mine panel including the following:

(i) Designation of the planned overburden piles setting forth the manner in which it is planned they will be prepared so as to minimize erosion.

(ii) Designation of measures to be taken to prevent hazardous siltation of streams and lakes.

(iii) The roads which the Lessee plans to abandon and cross-ditch.

(iv) The revegetation activities which the Lessee plans to conduct.

SECTION 3161.4–3 ACCEPTANCE OR REJECTION OF CONSERVATION AND RECLAMATION PLAN: APPEAL BY LESSEE

(*a*) Upon determination by the authorized officer that a conservation and reclamation plan or any amended plan submitted by Lessee pursuant to Section 3161.4–2 meets the requirements of Sections 3161.4–5 and 3161.4–6, said officer shall deliver to the Lessee in writing a notice of acceptance of the conservation and reclamation plan and thereafter said plan shall govern and determine the nature and extent of the conservation and reclamation obligations of Lessee for compliance with the provisions of Sections 3161.4–5 and 3161.4–6.

(*b*) Upon determination by the authorized officer that a conservation and reclamation plan or amended plan referred to in Section 3161.4–2 herein fails to fulfill the requirements of Sections 3161.4–5 and 3161.4–6 of these regulations, he shall deliver to the Lessee in writing a notice of rejection of the conservation and reclamation plan and shall set forth in said notice of rejection the manner in which the plan fails to fulfill said requirements and shall stipulate the corrective requirements necessary to comply with said regulations. Upon receipt of said notice of rejection the Lessee may submit amended plans. Upon further determination by the authorized officer that an amended plan does not fulfill the requirements of the regulations, he shall deliver to the Lessee in writing a notice of rejection of the amended conservation and reclamation plan, and shall set forth in said notice of rejection the manner in which such amended plan fails to fulfill said requirements and shall stipulate the requirements necessary to comply with said regulations.

(*c*) The authorized officer shall deliver to the Lessee within thirty (30) days after the receipt of any conservation and reclamation plan or amended conservation and reclamation plan the notice of rejection or notice of acceptance of said plan as the case may be, provided, however, that if the authorized officer fails to deliver a notice of acceptance or notice of rejection within said time period, the plan submitted shall be deemed to comply with the regulations, and Lessee may commence and conduct his mining operations on the phosphate mine panel covered by such plan as if a notice of acceptance of said plan had been received from the authorized officer.

(*d*) Lessee may at any time after the receipt of a notice of rejection of a conservatioan and reclamation plan or amended conservation and reclamation plan deliver to the authorized officer in writing a notice of intent to appeal the determination of the authorized officer that a given plan or amended plan does not meet the requirements of the regulations, whereupon the authorized officer shall within thirty (30) days from the date of the receipt of said notice of intent to appeal, issue and deliver to the Lessee a written decision formally rejecting the said plan or amended plan, which decision shall set forth in detail the reasons for such rejection and the factual findings upon which such rejection is based together with the action which must be taken by the Lessee in order to comply with said regulations. Lessee may then appeal such decision as hereinafter provided.

SECTION 3161.4–4 CHANGES IN APPROVED PLAN; ACCEPTANCE OR REJECTION OF SUPPLEMENTAL PLAN; APPEAL BY LESSEE; EMERGENCY PROCEDURES

(*a*) In the event that circumstances arise which the Lessee believes require a change in an approved conservation and reclamation plan, including any amended conservation and reclamation plan, then the Lessee may submit to the authorized officer a supplemental plan setting forth the proposed changes and stating the reasons therefor. Upon determination by the authorized officer that a supplemental conservation and reclamation plan or any amended supplemental plan submitted by Lessee meets the requirements of Sections 3161.4–5 and 3161.4–6 herein, said officer shall deliver to the Lessee in writing a notice of acceptance of said supplemental plan and thereafter said supplemental plan shall govern and determine the nature and extent of the conservation and reclamation obligations of the Lessee for compliance with the provisions of Sections 3161.4–5 and 3161.4–6.

(*b*) Upon determination by the authorized officer that a supplemental conservation and reclamation plan fails to fulfill the requirements of Sections 3161.4–5 and 3161.4–6 of these regulations, he shall deliver to the Lessee in writing a notice of rejection of the supplemental conservation and reclamation plan and shall set forth in said notice of rejection the manner in which said plan fails to fulfill said requirements and shall stipulate the corrective requirements necessary to comply with said regulations. Upon receipt of said notice of

rejection the Lessee may submit amended supplemental plans. Upon further determination by the authorized officer that an amended supplemental plan does not fulfill the requirements of the regulations, he shall deliver to the Lessee in writing a notice of rejection of amended supplemental plan and shall set forth in said notice of rejection the manner in which such amended supplemental plan fails to fulfill said requirements and shall stipulate the requirements necessary to comply with said regulations.

(*c*) The authorized officer shall deliver to the Lessee within thirty (30) days after the receipt of any supplemental conservation and reclamation plan or amended supplemental conservation and reclamation plan to notice of rejection or notice of acceptance of said plan as the case may be, provided, however, that if the authorized officer fails to deliver a notice of acceptance or notice of rejection within said time period, the supplemental plan submitted shall be deemed to comply with the regulations and Lessee may commence and conduct or continue, as the case may be, his mining operations as if a notice of acceptance of said plan had been received from the authorized officer.

(*d*) Lessee may at any time after receipt of a notice of rejection of any supplemental conservation and reclamation plan or amended supplemental conservation and reclamation plan deliver to the authorized officer in writing a notice of intent to appeal the determination of the authorized officer that a given supplemental plan or amended supplemental plan does not meet the requirements of the regulations whereupon the authorized officer shall within thirty (30) days from the date of the receipt of said notice of intent to appeal, issue and deliver to the Lessee a written decision formally rejecting the said supplemental plan or amended supplemental plan which decision shall set forth in detail the reason for such rejection and the actual findings upon which such rejection is based together with the action which must be taken by the Lessee in order to comply with said regulations. Lessee may then appeal such decision as hereinafter provided.

(*e*) The lessee shall not conduct mining operations with respect to a phosphate mine panel which is covered by an approved conservation and reclamation plan which are contrary to such plan until the supplemental conservation and reclamation plan or amended supplemental conservation and reclamation plan has been accepted as provided in these regulations, except that if Lessee determines that unforseen events or unexpected conditions require immediate changes of an approved conservation and reclamation plan or any approved amended or supplemental plan, the Lessee may continue mining operations in accordance with the procedures dictated by the changed conditions pending submission and approval of a supplemental plan even though such operations do not comply with the approved plan, provided, however, that nothing herein stated shall be construed to excuse the Lessee from performing mining operations in a good and miner-like manner and in accordance with the requirements of Sections 3161.4–5 and 3161.4–6.

SECTION 3161.4–5 CONSERVATION AND RECLAMATION REQUIREMENTS

(*a*) Every Permittee or Lessee who conducts prospecting, development or mining operations on permit or lease premises shall perform the following land conservation and reclamation activities:

(1) Ridges of overburden shall be leveled in such manner as to have a minimum width of ten feet at the top.

(2) Peaks of overburden shall be leveled in such a manner as to have a minimum width of fifteen feet at the top.

(3) Overburden piles which have been deposited in such a manner as to be flat on top shall be prepared to minimize erosion from water which is deposited on top of such overburden piles.

(4) Where water run-off from overburden piles, phosphate ore stockpiles or mined areas results in stream or lake siltation in excess of that which normally results from run-off and which creates a hazard to wildlife, stock, or humans using said water, Lessee shall prepare the overburden piles, phosphate ore stockpiles, mined areas and adjacent off-site premises as necessary to reduce the siltation to non-hazardous levels.

(5) Roads which are abandoned will be cross-ditched insofar as necessary to avoid erosion gullies.

(6) Prospecting and development drill holes shall be plugged so as to eliminate hazard to humans or animals.

(7) Abandoned overburden piles shall be topped, to the extent that such overburden is reasonably available from the pit, with that type of overburden which is conducive to the control of erosion or the growth of the vegetation which Lessee elects to plant thereon.

(8) Lessee shall conduct revegetation activities on the mined areas, overburden piles, and abandoned roads in accordance with the provisions of Sections 3161.4–6 and 3161.4–7.

(*b*) The authorized officer may direct that a given road or portion thereof not be cross-ditched or revegetated and upon such request the Lessee shall be excused from performing such activities as to such road or portion thereof.

(*c*) Leases and prospecting permits entered into pursuant to these regulations and conservation and reclamation plans shall contain no terms requiring performance by Lessee of conservation and reclamation activities in addition to those set forth in these regulations and all requirements as to conservation and reclamation activities shall be reasonably construed to further the policy of the department to encourage the exploration and development of the phosphate deposits on public lands as well as the reclamation and conservation of the lease and permit premises.

SECTION 1361.4–6 REVEGETATION

(*a*) Lessee shall plant on the roads, mined areas, and overburden piles vegetation species comparable to the vegetation which was growing on the area occupied by the road, mined areas, or overburden piles prior to the prospecting, development and mining operations.

(*b*) No planting shall be required on any road, mined area, or overburden pile, or portions thereof, where planting would not be practicable or reasonable because the soil is composed of sand, gravel, shale, stone or other materials to such an extent as to inhibit plant growth or if the climatic conditions are such that planting has little likelihood of being successful.

(*c*) No planting shall be required to be made with respect to any of the following:

(1) On any mined area or overburden pile proposed to be used in the mining operations for haulage roads, so long as such roads are not abandoned.

(2) On any mined area or overburden pile where pools or lakes may be formed by rainfall or drainage run-off from the adjoining lands.

(3) On any phosphate ore stockpile.

(4) On any prospecting or development trench which will become a part of any pit or overburden disposal area.

(5) On any road which Lessee intends to use in its mining operations so long as said road has not been abandoned.

(6) On any mined area consisting of exposed rock which will not support vegetation.

SECTION 3161.4–7 CONSERVATION AND RECLAMATION ACTIVITIES: STANDARDS, COMMENCEMENT AND COMPLETION

All conservation and reclamation activities required to be conducted under Sections 3161.4–5 and 3161.4–6 shall be performed in a good and workman-like manner with all resonable diligence and as to a given prospecting or development road or trench within one year after abandonment thereof. The conservation and reclamation activity as to a given phosphate mine shall be commenced within one year after mining operations have permanently ceased as to such panel, provided however, that in the event that during the course of mining operations on a given phosphate mine panel, the Lessee permanently ceases disposing of overburden on a given overburden pile or permanently ceases removing phosphate from a given pit, or permanently ceases using a given road, then the conservation and reclamation activities to be conducted hereunder as to such pit, road, or overburden pile, shall be commenced within one year after such termination despite the fact that all operations as to the phosphate mine panel which includes such pit, road or overburden pile have not permanently ceased. It shall be presumed that the Lessee has permanently ceased mining operations as to a given overburden pile or pit if no substantial amount of overburden has been placed on the overburden pile in question or if no phosphate or associated or related minerals have been removed from the pit in question, as the case may be, for a period of ten (10) years unless within said time Lessee in good faith advises the authorized officer that such operations have in fact not permanently ceased

and that the Lessee intends to resume mining operations with respect to such pile or pit.

SECTION 3161.4–10 DECISION OF AUTHORIZED OFFICER REQUIRING COMPLIANCE; TIME PERIOD FOR COMPLIANCE

Lessee shall not conduct cross country travel, construct roads, drill holes, or make excavations which are not in accordance with good and miner-like prospecting, development and mining operations.

SECTION 3161.4–9 COMPLIANCE WITH WATER POLLUTION, WATER USE, MINING SAFETY STATUTES AND REGULATIONS

Lessee shall conduct all prospecting, development and mining operations in accordance with all applicable statutes and reasonable regulations pertaining to water pollution, water use, and mining safety in effect as of the date of the lease.

SECTION 3161.4–10 DECISION OF AUTHORIZED OFFICER REQUIRING COMPLIANCE; TIME PERIOD FOR COMPLIANCE

With respect to leases and permits which are subject to the provisions of Sections 3161.4–5, 3161.4–6, 3161.4–7 and 3161.4–8, in the event that the authorized officer determines that the Lessee is not conducting prospecting, development or mining operations in accordance with the provisions of said Sections, said officer shall, prior to the commencement of any action under Section 3165.2 of these regulations, issue a decision setting forth the manner in which the Lessee is failing to comply with the provisions of said sections, the action which should be taken by the Lessee to rectify such a failure and to comply with said regulations together with the time period within which such action should be taken. The time period designated shall be long enough to allow the Lessee in the exercise of reasonable diligence to rectify any failure to comply as designated in said decision. In the event that the Lessee takes such action as is necessary to comply with said regulations within the time period designated by said officer or within the time period designated in any decision rendered on appeal, the Lesser shall not proceed with action pursuant to Section 3165.2 as to any failure designated.

SECTION 3161.5–1 RIGHT OF APPEAL; HEARING

Any Lessee may appeal any decision issued pursuant to the regulations contained in this part. Such an appeal shall be governed by the regulations set forth in Part 1840 except as modified by Sections 3161.5–2 and 3161.5–3. Hearings conducted pursuant to such appeal shall be governed by Part 1850.

SECTION 3161.5–2 DECISION ON APPEAL: DESIGNATION OF TIME PERIOD FOR COMPLIANCE

Any decision of the director or secretary requiring the Lessee to perform certain acts relative to his prospecting, development, mining, conservation or reclamation operations shall specify the time period within which such action should be taken, and the time period designated shall be long enough to allow the Lessee, in the exercise of reasonable diligence, to perform the required acts.

SECTION 3161.5–3 DECISION MADE EFFECTIVE DURING APPEAL: RIGHT TO JUDICIAL REVIEW

Any decision requiring the Lessee to perform or refrain from performing certain acts relative to his prospecting, development, mining, conservation or reclamation operations shall be considered a final decision so as to be agency action subject to judicial review under Section 10(c) of the Administrative Procedure Act of June 11, 1946 (60 Stat. 237), if it has been made effective pending a decision on appeal.

EXHIBIT E

SUMMARY OF STATEMENT OF PHOSPHATE LANDS CONFERENCE

(Response to proposed rulemaking published July 20, 1967, relating to reclamation of surface mixed lands)

95–623—68——16

I. INTRODUCTION

The Conference desires to cooperate with the Department in formulating regulations to accomplish adequate mined land reclamation. The proposed regulations in certain respects are impractical and unsuited to western phosphate exploration and mining.

II. RÉSUMÉ OF OBJECTIONS

A. Requiring the submission of a plan for operation prior to commencing exploration opeartions, is impractical because at this stage no one knows enough about the ore body to determine whether, where, or how mining operations will be undertaken.

B. Vesting authority in the "appropriate officer" to control exploration activities which in western phosphate mining include almost exclusively the digging of comparatively small trenches and drilling of exploration holes is impractical because the location of these holes and trenches must be governed by geologic conditions. Submission of an exploration operations plan for approval is unnecessary in order to bring about reclamation of the land affected.

C. Vesting the authorized officer with authority to control not only reclamation activity but also mining methods results in unnecessary interference with mining operations.

D. The "appropriate officer" should be a person who possesses geological and engineering training and who has had mining experience.

E. The regulations provide for an "open ended" contract thus allowing the Department to change unilaterally the obligations and hence increase the mining costs of a holder.

F. All anticipated supplemental regulations should be presented and reviewed before the present proposed regulations are adopted.

G. The regulations do not contain limitations and standards as to what a holder may be required to do to achieve the objectives of the regulations, and thus a holder is subjected to the unfettered discretion of the "appropriate officer".

H. The regulations do not establish guidelines for reclamation on a local, regional and industry basis.

I. The holder with an "open end" lease or permit may not be able to obtain bonding or financing.

J. The Department should not be able to exclude an area from development after a holder has paid for a lease on the basis of being able to develop all economically available phosphate on the premises.

K. The regulations do not provide for coordination among various federal and state agencies which have overlapping jurisdiction.

L. The Department should not be allowed to in effect cancel all leases of a given lessee if a bond is forfeited as to one of his leases.

M. The appeal section lacks provisions for impartial hearings and fails to specify the procedure and basis for appeal.

O. There are no time limits within which the Department must act on proposed plans submitted by a holder.

P. Several terms are undefined, ambiguous and uncertain of meaning.

III. PROPOSED ACTION

Enclosed are proposed regulations which substantially avoid the problems set forth above but which nevertheless provide for adequate declamation of federally owned western phosphate lands. The Conference suggests that the time for submittiing comments be extended to allow time for a cooperative effort to establish satisfactory regulations pertaining to mined land reclamation. The Conference also raises a question as to whether or not sweeping changes at this time are premature in view of the activities of the Public Land Law Review Commission.

STATEMENT OF THE PHOSPHATE LANDS CONFERENCE

By proposed rule making published in the Federal Register of Thursday, July 20, 1967, the Secretary of the Interior proposed to add a new part to Title 43 of the Code of Federal Regulations relating to the protection and reclamation of surfaced mined lands. Interested parties have been invited to submit written comments by October 20, 1967. This statement is prepared in accordance therewith.

I. INTRODUCTION

The publishing of the proposed rules came as a surprise to the Phosphate Lands Conference in view of the fact that representatives of the Conference had met with representatives of the Department in December of 1966 to discuss the proposed rule making for the reclamation of phosphate land and had understood that the Department would be in contact with the industry relative to the proposals discussed at the December meetings before further action was taken by the Department. Nevertheless, since receiving notice of the publication of the proposed rules, the members of the Conference have met to consider the newly proposed regulations.

The purpose of this statement is to highlight the problems that would be encountered by the western phosphate mining industry and the United States if the proposed regulations were adopted in their present form. The Conference is in accord with the policy that the exploration for and mining of phosphate should be conducted in a manner consistent with reasonable land conservation practices and renews its offer to cooperate with the Department in formulating regulations which would accomplish this objective.

II. ANALYSIS OF PROPOSED REGULATIONS

Notwithstanding the agreement of all members of the Conference that phosphate mining operations should be conducted in accordance with reasonable conservation practices, they find that the proposed regulations in certain respects are impractical and unsuited to western phosphate exploration and mining. In this regard, the Conference submits the following analysis of the proposed regulations:

A. Submission of plan for operation prior to commencing exploratory, development, or extractive operations

While the Phosphate Lands Conference, as indicated in the proposed regulations submitted to the Department by it dated November 16, 1966, believes that the most feasible approach to the reclamation of surface-mined land is to have a plan for reclamation submitted and approved, it is virtually impossible to have such a plan submitted and approved before exploration is commenced.

Prior to exploration, no one knows what extracting operations will be conducted, if any, on the lands in question. Large areas containing phosphate deposits are classified as subject to the leasing provisions of the Mineral Leasing Act notwithstanding almost a total lack of knowledge of the extent, attitude, quantity, quality, mineability or workability of the deposits. At the time of the commencement of exploration activities neither the United States nor the holder possesses any appreciable knowledge about the nature of the mineral deposits on the leased lands. For example, it is impossible to determine—

(*a*) The precise location of the proposed mining operation.
(*b*) The area where the overburden will be stored.
(*c*) The amount of surface that will be disturbed.
(*d*) The nature of the excavation that will be necessary in order to obtain the ore.
(*e*) The size of the piles of removed overburden and their location and design.
(*f*) The nature and extent of erosion problems, if any.
(*g*) What livestock operations might be interfered with.
(*h*) What streams, if any, will be interfered with.
(*i*) What crops, including foliage, timber, etc. will be disturbed and the extent thereof.
(*j*) Size and types of equipment to be utilized for exploration, development, or extractive operations.
(*k*) Capacity, character, standards of construction, size and location of structures and facilities to be built.
(*l*) The method of handling, storing and using explosives and fire.

It is impossible at the time of the commencement of exploration activities to determine what steps will have to be taken in order to remove the ore and thus obtain the objective of "encouraging the exploration and development of the phosphate deposits of the public lands" and at the same time comply with the objectives of the proposed regulations. Consequently, it would not only be impossible to describe these operations, but, in addition, it would be impossible to determine what reclamation activities would be needed.

Although it must be recognized that unexpected situations may arise at anytime during the course of mining which would alter the factors referred to above. an effort should be made to arrive at the most opportune time for the determination of the activities to be undertaken in furtherance of mining according to good and miner-like practices and with a view to conserving the other resources. It is suggested that the most opportune time to make such a determination is after the lease has been signed and sometime shortly before mining commences into given area.

B. Authority to control exploration activities

Exploration activities performed in western phosphate mining which would disturb the surface consist largely of digging comparatively small trenches and drilling exploration holes. The proposed regulations require the holder to present to the Department a plan of his operations including where roads will be built, etc., and further grant to the Department the authority to designate changes in these plans and thus control where holes will be drilled and trenches dug.

In phosphate exploration or mining, it is impossible to "control" the location of drill holes. The location of a given hole is determined by geologic conditions. In the process of exploration, the lessee must be allowed to drill where his training and experience in the light of geologic conditions indicate he should. In most instances he does not know where his next drill hole should be until he has completed his last drill hole—and the time lapse may be a matter of hours. This is true both as to exploration conducted to determine the presence of phosphate under a phosphate prospecting permit and as to exploration done after the granting of the lease for the purpose of determining how the ore body lies and its phosphate content. Since it is impossible to plot in advance the location of drill holes, if the Department is to dictate the location of such drill holes, it would be necessary to either have a representative from the Department on the scene when the drilling was taking place or to have the lessee obtain permission to drill each hole. It is submitted that either procedure is impractical and in fact unnecessary inasmuch as the location of such holes is determined by geologic conditions, and the lessee for economic reasons will not drill any more holes than is necessary. Reclamation of the areas affected by exploration activities could be accomplished without the submission of a plan of operation prior to commencing the exploration activities by establishing the requirements for such reclamation in the regulations.

C. Authority to control methods of extracting phosphate

The proposed regulations contemplate that the holder shall, prior to commencing exploration, development, or extracting operations, present to the Department a description of the proposed methods of operating and that the Department may designate the changes in such plans that it deems necessary. "Method of Operation" is defined in the proposed regulations as:

"The method or manner by which a cut or open pit is made, the overburden is placed or handled, water is controlled or affected and other acts performed by the operator in the process of exploring or uncovering and removing a mineral deposit." (§ 23.3 (e))

The regulations further provide that this description shall include but not be limited to:

(*a*) Proposed roads or vehicular trails to the area.

(*b*) Size and types of equipment to be utilized for exploration, development or extractive operations.

(*c*) Capacity, character, standards of construction, size and location of structures and facilities to be built.

(*d*) The method of handling, storing and using explosives and fire, and the safety precautions to be taken during such use.

(*e*) Measures to be taken to avoid damage to property or improvements, roads, trails and water courses.

(*f*) Measures to be taken to prevent or control fire, soil erosion, water pollution, damage to fish and wildlife, and hazards to public health and safety.

(*g*) Proposed manner and time of performance of work to reclaim areas disturbed by holders operation.

The problem of presenting this type of information before exploration commences has already been discussed herein. Furthermore, the determination of the size and type of equipment that will be used may change from day to day and from hour to hour. It is submitted that to allow the federal government through

some unknown "appropriate officer" to control not only the reclamation activities but also the actual methods of mining, creates an onerous and unnecessary burden on the person engaging in the mining activity.

D. Definition of "appropriate officer"

The definition of "appropriate officer" is vague and meaningless. Will he be an officer of the B.L.M., the Bureau of Indian Affairs, or the U.S.G.S.? It is suggested that the definition should be specific enough to allow industry to know who the officer will be in the various areas of operation. The regulations should further specify that the "appropriate officer" will possess geological and engineering training and that he will have had experience in mining.

E. The open end contract

The proposed regulations provide:

"Permits, licenses, leases, or other contracts will require the holder thereof to conduct his operations in accordance with previously approved plans and applicable departmental regulations." (§ 23.2(b)).

"The appropriate departmental officer, after reviewing the information and plans submitted by a holder pursuant to the requirements of this part, shall indicate to the holder any changes, additions or amendments necessary to conform to the objectives of the regulations in this part and in *other supplemental departmental regulations*." (§ 23.5(a). (Emphasis added.)

"Permission for the holder of a permit, license, lease, or other contract to operate shall not be approved by the appropriate departmental officer if he determines that plans of operation and reclamation which will achieve the purposes of these regulations or *other supplemental departmental regulations* have not been formulated." (§ 23.6(a)). (Emphasis added.)

"The appropriate departmental officer shall have the right to enter upon the lands under any permit, license, lease or other contract at all reasonable times for the purpose of inspection to determine whether the provisions of these regulations, terms of the approved land reclamation plan *or any other applicable departmental regulations* are or have been complied with.

"If it is determined through inspection of the premises that a holder has failed to comply with any provisions of the regulations in this part, the terms of his approved operating plan or *any other applicable departmental regulations* a notice of non-compliance shall be served upon the holder." § 23.9(a)(b)). (Emphasis added.)

From the foregoing it is apparent that the Department, simply by the adoption of supplemental regulations, may require a holder to perform activities not contemplated by the present regulations or any approved mining and reclamation plan. This permits the Department to change the terms of its agreements at any time and thus allows the Department to require additional activities of a holder that were not contemplated at the time that the lease or permit or other agreement was signed. Thus the holder would be bound by the terms of any agreement, but the Department could make changes at will. The holder would never know just what costs might be added as a result of the changes. It would seem that as to mineral leases such a procedure is contrary to the intent of the provisions of 30 U.S.C. § 212, which provide that the terms of a lease are subject to readjustment at the end of each twenty (20) year period succeeding the date of the lease.

F. Contemplated supplemental regulations

The proposed regulations in several places advert to supplemental department regulations. The nature and purpose of such supplemental regulations can only be left to conjecture. However, if the Department intends to adopt supplemental regulations, it is suggested that it would be more feasible to wait until the specific supplemental regulations are available for review before adopting the general regulations as proposed.

G. Ambiguities and absense of limitations or standards governing what the lessee may be required to do

The proposed regulations are ambiguous as to what a holder may be required to do. Section 23.7 appears to set forth what the responsibilities of a holder are, but it appears from other sections that a holder may be required to perform activities in addition to those listed in this section. (For example, see §§ 23.4(c) and 23.4(d).) Furthermore, there are some rather board general statements that are unqualified by other provisions of the regulations. For example, § 23.2(b) provides: "The holder will also be required to take prescribed steps to reclaim

such land." The term "prescribed steps" is nowhere defined or tied into the regulations pertaining to what a holder may be required to do.

The discussion above relative to the adoption of supplemental regulations requiring additional activities also emphasizes the fact that there may be no limits as to what an operator may be required to do.

In addition, broad power is given to the departmental officer to designate mining and reclamation activities without any standards or guidelines as to when such activities may be required by the appropriate officer. For example, the proposed regulations provide:

"Unless it is determined by the appropriate departmental officer that environmental conditions of an area to be mined are such that regrading and backfilling is not reasonable or practicable, the holder shall submit a plan showing the proposed methods of regrading of areas of land affected by an operation." (§ 23.4(c))

The regulations are silent as to what environmental conditions would justify a determination by the appropriate officer that regrading and backfilling is or is not reasonable or practicable. Nothing is said as to whether or not economic factors must be considered in this regard.

The regulations advert to soil preparation prior to replanting, (§ 23.4 (d)(1)), and require the holder to indicate the types and mixtures of shrubs, trees, or tree seedlings that the operator proposes to be planted, (§ 23.4 (d)(2)), but there are no guidelines or standards to govern or limit what may be required. The terms "reasonable" and "practicable" are used, but in this context are absolutely meaningless inasmuch as the discretion as to what is "reasonable" and "practicable" is left to the "appropriate officer". It is submitted that there is often wide divergence of opinion as to what is reasonable and practicable depending on the viewpoint, experience, and training of the person expressing his opinion. To fill up the pits from which phosphate has been extracted in most instances would require the uphill hauling of millions of tons of earth at a cost that would make the mining operation unfeasible. It is submitted that the "appropriate officer" should not be in a position to require such activity without being subject to some limiting guidelines.

In addition, to allow such "appropriate officer" such broad authority is tantamount to a delegation of the rule making power to a subordinate official of an administrative agency. The granting of such power would violate the rule making requirements of the Federal Administrative Procedures Act and the estabished policy of the Department permitting public participation in the rule making process.

Should the requirements set forth by the "appropriate officer" be reasonable, there would be no onerous burden placed upon the holder. However, such an assumption cannot be made and the "appropriate officer" could after a holder had expended considerable time and effort in establishing a mining operation, impose conditions without the consent of the holder or the benefit of the rule making process that would be so onerous as to make the mining operation unprofitable and result in a total loss of invested capital. A subordinate officer could also establish practices inconsistent with the policies and objectives of the Department as set forth in the regulations.

H. The regulations should establish guidelines on a local, regional, and industry basis and should contain a standard of reasonableness

As noted above, the regulations, as proposed, grant broad authority to the "appropriate officer" to determine not only the reclamation but also the mining procedures of a holder. Final determination as to what may be required is left to the almost unfettered discretion of the "appropriate officer". It is suggested that supplemental regulations should be adopted on a local and regional basis establishing guidelines as to what reclamation activities may be required by an "appropriate officer" with respect to a given industry in a given locality—thus providing some protection to the holder from the whims of unfettered discretion.

Furthermore, the regulations should establish an overall standard of reasonableness to protect the holder from unreasonable demands.

I. Effect on financing of operation and obtaining bonds

A holder, particularly a small operator, may not be able to finance his mining operation or obtain a bond if lending or bonding institutions decide that there are excessive risks of losing a lease through inability to meet governmental requirements which may change without any control of the lessee.

J. Exclusion of land area from permission to operate

Section 23.6 of the regulations provides that the "appropriate departmental officer" may exclude land area from permission to operate if he determines "that

any part of the area of land described in a request for permission to operate is such that previous experience with operations under similar conditions shows that substantial deposition of sediment in stream beds, landslides, or water pollution cannot feasibly be avoided * * *."

The regulations contain no definition of "substantial deposition of sediment" or "water pollution". This, of course, jeopardizes substantial investments represented in rental and royalty payments and plant construction. There are no guidelines to govern the actions of the "appropriate departmental officer" and thus these investments are risked and may be lost through the exercise of unfettered discretion of the said departmental officer.

K. Coordination among Federal agencies and problem of conflicting Federal and State authority

The proposed regulations appear to apply to lands now under the jurisdiction of the Forest Service with respect to management of surface use. Such dual control by the two departments is almost sure to lead to conflicts resulting in a situation where the holder does not know what instructions to abide by.

The regulaions as they pertain to mining safety, and in establishing general practices relating to minimizing the polluting of the waters of springs, streams, wells or reservoirs invade the province and jurisdiction of other federal agencies and the several states.

The control of water pollution is largely a state activity. In addition to the various regulatory statutes of each state, Congress has enacted the Federal Water Pollution Control Act, 33 U.S.C.A. § 466. The abatement program of that act indicates the sensitivity of Congress about displacement of functions traditionally belonging to the states. The act established a Federal Water Pollution Control Administration which has been established as a separate bureau in the Department of the Interior and provides for cooperation with state water pollution control agencies and encouragement of uniform state laws, an establishment by the states of water quality standards, together with grants for research. Only if it shall be determined after hearing that a state has not submitted a plan approved by the agency or if there is failure to comply with the requirements of the plan then, and only then, can that administration take affirmative steps to control and abate water pollution.

Safety regulation is imposed by other state and federal laws and regulations. For example, the United States Bureau of Mines now makes regular safety inspections of the phosphate mining operations on federal leases.

Furthermore, the proposed regulations would duplicate in the "appropriate officer" the conservation responsibilities historically performed by the Regional Mining Supervisor of the U.S.G.S.

The regulations should contain provisions for avoiding conflicts among the various federal and state agencies.

L. Shutdown of all operations upon forfeiture of bond

The effect of § 23.6(e) is to allow the Department to completely close down a holder's operations on all its permits and leases throughout the United States if the "appropriate officer" concludes that a given bond should be forfeited. Thus, if the "appropriate officer" concludes that re-vegetation has not been properly concluded, the Department can refuse to grant permission to conduct exploratory, development, or extractive operations on federal lands under the jurisdiction of the Department resulting in a closing down of all a holder's operations. It is submitted that this would be tantamount to a cancellation of a holder's leases and that such authority far exceeds any authority given in the applicable statutes and is contrary to the provisions of 30 U.S.C. § 188.

The provision for appeal in the proposed regulations fails to specify the procedures to be followed for such appeals and the basis upon which an adverse decision may be reversed. As to departmental appeals, a holder should be entitled to a hearing before an examiner who is completely independent of the Department of the Interior and who would be authorized and required to make findings of fact in each case. The regulations should grant a holder the right to appeal any directive, order, or decision to the appropriate courts. It is further suggested that any decision of the Department should be considered to be a final agency action subject to judicial review under § 10c of the Administrative Procedures Act if it is made effective pending a departmental appeal of the decision.

N. Absence of time limits

The regulations contain no time limits within which the Department must act on proposed plans submitted by a holder. A holder must be able to program his plans for his operation and extensive delays may result in a failure of the enterprise with resulting loss of investment. Time limits should be set forth within which the departmental officer would be required to act on plans submitted to him.

O. Ambiguity of terms

The regulations use several terms which are ambiguous and uncertain of meaning. Examples of these (some of which have been heretofore noted) include: "prescribed steps", "water pollution", "stream pollution", "substantial deposition of sediment", "on site", "off site", "damage to lands", "damage to other resources—such as scenic, recreational and ecological values", "appropriate departmental officer", and "refuse".

III. PROPOSALS FOR REGULATIONS

As previously noted the Phosphate Lands Conference, pursuant to meetings held with the Department after the publication of the proposed regulations of May 7, 1966, prepared and presented to the Department in November of 1966, proposed regulations for the reclamation of federally owned western phosphate lands. These proposed regulations taken into consideration the peculiarities of western phosphate mining, protect the operator from unrealistic demands by administration authorities, but nevertheless provide for satisfactory reclamation of the land. The Conference resubmits these industry proposed regulations herewith as Exhibit "A" and requests that they be given serious consideration.

IV. ACTIVITIES OF OTHER FEDERALLY SPONSORED GROUPS

The Public Land Law Review Commission is currently reviewing the laws, regulations, and problems involving public lands including phosphate lands. It is anticipated that a substantial amount of data will be obtained and that ultimately legislation and enabling regulations will be adopted which will set forth the wishes of the people through their duly elected representatives. In addition various western phosphate mining companies have entered into a cooperative study with the United States Forest Service to develop methods for rehabilitating mined areas. In view of the availability of this information in the not too distant future, the Conference again suggests that perhaps it is premature to attempt to make sweeping changes at this time.

V. REQUEST FOR ADDITIONAL TIME

As demonstrated by its past efforts, the Conference is desirious of cooperating with the Department to achieve the objective of adequate mined land reclamation. It is suggested that the time for submission of comments, suggestions, and objections be extended to allow the Conference time to meet with representatives of the Department to discuss and analyze the problems and determine the best approach for establishing a workable program.

Furthermore, it is only because of the past activities pursuant to the proposed departmental regulations of May 7, 1966, that the Phosphate Lands Conference has been able to organize its members and present a detailed analysis of the July 20, 1967, regulations together with industry proposed regulations within the time period allowed. The Conference believes that other segments of the mining industry working on leasable minerals are also amenable to the objective of adequate mined land reclamation. If these segments of the industry are to make a positive contribution relative to proposed regulations, it would appear that further time for presentation and discussion of ideas would be required.

The Conference suggests that consideration be given to withdrawing the present proposed regulations pending the development of proposals on a practical and cooperative basis. We sincerely believe that the cooperative effort will succeed and that this approach will be a credit to all interested parties.

Senator METCALF. Thank you very much. Thank you, Senator. Go ahead, Dr. Emigh.

Mr. EMIGH. Thank you, very much Mr. Chairman. Our next witness is Dennis M. Olsen, counsel for the Phosphate Lands Conference, and in case you are concerned over the fact that his comments go from page 13 to 36 he is just going to review them briefly and pick up high points. Mr. Olsen.

Mr. OLSEN. Thank you, Dr. Emigh, Mr. Chairman, Senator Jordan, Senator Church, we appreciate the opportunity of being here today and, as Dr. Emigh has indicated, I do not intend to read my statement at length.

As he has pointed out, the objective of my particular presentation is to present an analysis of the proposed regulations. Our written statement sets forth in outline form some of these objections and problems that we see in the proposed legislation with specific references to the provisions of the bill which will substantiate our claims. However, today I will merely summarize those claims without reviewing the specific provisions at length.

Firstly, we note that both bills recognize that the regulation of surface mining must take into consideration the conditions existing in a given locality as they pertain to the mining characteristics and minerals involved.

The conference endorses this approach and in recognition of this situation aserts that the proposed legislation should contain provisions which will insure that these important factors, together with the importance of the utilization of mineral resources, be given proper consideration in the regulation of surface mining for the purpose of achieving mined land reclamation.

I think that I should emphasize again that the real basis for a lot of the objections that we are submitting here today is the regulations that we have already seen and had to deal with and anticipate from the Department of the Interior.

Going on to some other matters which we note with respect to those particular bills, we note that neither bill establishes any standards which define or limit in any detail the activities which may be required or prohibited under the auspices of the Department of the Interior.

Consequently under these bills the Secretary is supposed to establish regulations to control erosion, flooding, and pollution of water. He is to prevent air pollution. He is to prepare regulations to require revegetation back filling, replacement of soil, and the like.

But nothing is said in the bills as to how much, or when this type of activity is appropriate. The term "appropriate" establishes no standard whatsoever and this is the only term that is used in the bill to establish any standard.

What is "appropriate" is apparently to be determined solely by the judgment of the Secretary of the Interior.

Thus, under regulations promulgated pursuant to this act, a landowner could be precluded from extracting the minerals from his land if the mining activities even slightly impaired the natural beauty of the land under circumstances wherein the mining and reclamation activities required by these regulations to preclude the impairment of beauty would be so expensive as to make the extraction uneconomic.

Of course, the same applies with respect to any of the other listed burdens in Senate 3132.

Both bills, and as we understood it—this hearing was to deal with all bills before the committee—both bills; that is, S. 3132 and S. 3126, contemplate that backfilling of pits could be required even though a pit was in a remote arid region on a mountain under circumstances which would require the uphill hauling of millions of tons of earth, despite the fact that there was prosphate ore in the bottom of the pit which advancements in mining technology or future domestic need would make it economically feasible to extract. We would like to draw attention to the specific provisions of the bill which so provide and we would draw the committee's attention to section 101(a) of 3126 which provides for backfilling, and section 7(A)(1)(c) of 3132 which also provides for backfilling.

Senator METCALF. Now, Mr. Olsen, you know that this committee and this group is not going to require the filling of these pits. I come from a State where we are developing one of the largest copper mining open pit operations in the United States. Ultimately it will rival the Bingham pit. It may be at times that it would be necessary to backfill a small pit or even a small sand and gravel operation. I don't know. But nobody, no one in the whole United States from the Secretary of the Interior right on down, contemplates the requirement of backfilling an open mine pit.

I haven't had a chance to read some of your suggestions. If you are fearful that there is ambiguity I hope that you will submit specific language as counsel for this group to be assured that that will not be required. There has to be some latitude, but it is an affront to this committee to come in and say that as reasonable men you think that we are going to require that the pits on the Mesabi Range and the Bingham, Utah, and Butte, Mont., be filled.

Mr. OLSEN. Sir, we are most pleased to hear that as your views and as the views of this committee. We are also very pleased to hear this as the views of the Secretary of the Interior. We know that if and when we ever had a lawsuit over a situation like this we would certainly want to refer to your comments which are in the record, but our problem is that there is nothing in the bill which would prohibit a requirement for backfilling, not a thing.

Now, we know that this committee as it is now composed may not require this. We know that our present Secretary of the Interior may not require this. What we do not know is if there are many people in the United States who believe that these pits should be backfilled. So we feel that, in order for us to have some protection, for us to be assured as to whether or not we invest money in the phosphate operations in Idaho, there should be some kind of a standard set in this bill which would restrict unnecessary and unreasonable backfilling. That is all we are asking.

Senator CHURCH. Will you prepare some language that would seem to you to give you this sort of statutory protection? I agree with you that the term "appropriate" is so broad and wide as to be practically meaningless, but I think that it would be helpful to the committee to have some language submitted that would establish reasonable limitations here against what might possibly be arbitrary and capricious discretionary action on the part of some future Secretary.

I concur that a law ought to establish the necessary criteria within those reasonable guidelines within which the discretion must be exer-

cised, but simply to raise the question and not to submit specific language isn't doing the whole job I think you can do for the industry. It would be helpful for us to have specific language to look at when the time comes to consider this legislation in executive session.

Mr. OLSEN. Thank you, Senator, and we will be most pleased to do this. This is what we have been attempting to do with the Department for some 2 years in working out something that was feasible and most certainly we are ready, willing, and anxious to work with this committee.

Senator CHURCH. To do the same with this committee.

Mr. OLSEN. Yes, sir. In view of the position of this committee relative to backfilling I will not go into any more detail as to the impact of backfilling on our western phosphate lands, but let us just say that it would create a tremendous impact on our industry and on the landowners who hope to develop their lands and use them for phosphate mining. Unfortunately, there is nothing in the scope or intent provisions of the bill which give us any help either. The scope and intent provisions of the bill simply state that the regulations shall prevent or eliminate the burdens of mining upon the land and we respectfully submit that if you prevent them or eliminate them as required by the bill you eliminate mining. So here again we are without any standard and we are working with an unworkable situation and again we would be glad to work with the committee in this respect.

As a matter of fact, we would suggest that the purpose clauses state clearly that the purpose is to prevent where reasonably possible, or to reduce the adverse effects of mining but not to absolutely eliminate any alleged adverse effects. We feel that there should be no inconsistency or ambiguity in this regard and here again we would be pleased to work with the committee in drafting such legislation.

Senator CHURCH. Do you know of any kind of mining, Mr. Olsen, that does not, in fact, impose some burden upon the mine?

Mr. OLSEN. We don't know, Senator Church, and for that reason, when we noted that this proposed legislation has as its purpose that objective to eliminate these burdens, we were concerned.

We should also like to point out that, despite some statements that we have heard here, already, relative to these bills, under the provisions of S. 3132 the law could have a retroactive application requiring us to reclaim lands that have already been mined.

We have detailed the provisions of the bill which make this very clear but the fact is if you read the bill it does have retroactive application. I think that we can all understand the effect on the miner if we add a cost to his mining operation after he has mined and sold his product. It creates another impossible situation. We believe that both acts should stipulate that only those portions of a surface mine which are opened up and the waste disposal areas resulting therefrom after the effective date of the act or of the State plan or Federal regulations would be subject to those regulations. We feel this is only reasonable under the circumstances.

Senator CHURCH. May I ask at this point, Mr. Olsen, if you have any similar fears concerning the proposed regulations of the Department itself?

Mr. OLSEN. These are the same problems, Senator, that we have encountered with both sets of regulations that have been published thus far, the possibility of retroactivity.

Senator CHURCH. You mean you have the possibility of retroactivity.

Mr. OLSEN. I beg your pardon; not on retroactivity. I do not believe the regulations have presented that problem. I can refer to our comments but it is my recollection that that is not a problem that we have encountered.

Senator CHURCH. As you see it, it is a possible problem in connection with the proposed bill.

Mr. OLSEN. Yes, sir. We would also like to draw to the committee's attention that there is extremely broad discretion given to the Secretary under both bills. Several sections of S. 3132 allow the Secretary to act or make determinations based solely on his judgment or based upon what the Secretary "deems necessary," resulting in the Secretary again having unfettered discretion which may preclude any effective judicial review of these actions. Then we list some six or seven examples of actions being subject only to the discretion and the judgment of the Secretary.

In the past the Department of the Interior, for example, has taken the position, which in some instances has been upheld by the courts, that certain actions of the Secretary are not subject to judicial review.

Furthermore, when judicial review was permitted, statements in legislation or regulations pertaining thereto which granted the Secretary the authority to act based solely on his judgment made the reversal of any such actions almost impossible to obtain.

Legislation on the matter should specifically provide that any action of the Secretary is subject to judicial review and that the judgment of the Secretary is not to be the sole criteria in determining whether or not he has acted properly.

Continuing with my prepared statement, both bills not only stipulate that certain reclamation activities should be required, but also provide for the regulation and control of the extraction or mining methods as well, and we cite there the sections which so provide.

The phosphate lands conference asserts that adequate reclamation of western phosphate lands can be achieved without outside interference with extraction methods.

Due to the peculiarities of the western phosphate beds, which we have drawn attention to here, extraction plans often have to be changed with practically no notice. Delays and other problems incumbent in submitting and obtaining approval of extracting methods would create an onerous and unnecessary burden on the person engaging in the mining activity.

Overburden and ore must be removed as part of the mining operation. In western phosphate mining the method used in doing this is irrelevant from the standpoint of reclamation of the land. The economics of the operation and the variations in mining conditions require that the operator be allowed to utilize the extraction methods dictated by these conditions and not by a party having no economic responsibility for the success of the operation.

CIVIL AND CRIMINAL PENALTIES AND OTHER JUDICIAL REMEDIES

Both bills provide for criminal as well as civil penalties for failure to comply with regulations. In view of the day-to-day problems which often compel immediate changes in mining plans and in view of the extent of control over mining activities contemplated by the bills, the mining operator is placed in a very tenuous position when he cannot change his mining plans without being subject to criminal and civil penalties even if the change in plans results in no appreciable damage.

A civil penalty based on probable damages resulting from violation would be understandable. It is difficult to justify the assessing of civil and criminal penalties regardless of damage.

S. 3132, in addition to providing for civil and criminal penalties, also permits a civil action to be commenced in a Federal district court for a restraining order or injunction or other appropriate remedy to:

> Prevent a person from engaging in surface mining operations without a permit from the Secretary, or in violation of the terms and conditions of such permit.
>
> To prevent a person from placing in commerce the products of a surface mine produced in violation of an approved State plan.
>
> Or to enforce a right of entry.

The remedy preventing a person from putting his products into commerce could result in the closing down of a total operation, including not just a mine but all the plants dependent upon the mine. No restriction is placed on the use of this power. It is available with respect to the slightest violation, regardless of whether or not any actual damage results or is apt to result from the prohibited action. If such a remedy is to be available at all, it should only be permitted when substantial irreparable harm is apt to occur.

We would like to direct our comment now to the problem of coordination among the Federal agencies and conflicting Federal and State authority.

S. 3126 is to be administered by the Secretary of Agriculture and the Secretary of the Interior. Both these Secretaries have equal authority. This creates a tremendous problem because one Secretary can countermand what the other Secretary says and if you have a problem and you want to challenge the decision you must appeal it through the agencies of both Secretaries.

To us this is an unreasonable and unrealistic approach to solving the problem of mined land reclamation. We would also like to note that S. 3132 does not have any provisions for appealing within the Department a decision, nor does it have any provision for appealing the decision of the Secretary of the Interior. We believe that it is only proper that there be provision for appeals in both respects.

Senator CHURCH. Do you think in the absence of language the Uniform Administrative Procedure Act would apply?

Mr. OLSEN. Well, I think, Senator, that it very probably would, but we know that in the past, in dealing with the Department, it has taken the view in many instances that its interdepartmental decisions and its final decisions are not subject to review. So, to obviate any possible upholding of this position, we think the bill should specifically provide for the review, and we have made some other comments relative to review which I will not read into the record at this time.

As has been noted, both bills provide for regulation by the States, and while the Phosphate Lands Conference believes that the Western States can amply handle the problems of reclamation of surface mining, we submit that, if legislation is to be adopted to allow the States this authority only if they meet Federal standards, then there ought to be some kind of a guideline or standard governing the action of the Secretary in his determination of whether or not a State is meeting the Federal requirement.

Now if you might turn quickly to the last portion of our comments, I would like to mention that our foregoing comments have been directed primarily to a critique of the provisions in the two bills. In some instances the comments have indicated provisions which might be included in the act. The following constitute additional provisions which the conference respectfully suggests be considered for possible inclusion in the proposed legislation, at least as it may pertain to western phosphate mining.

To a large extent, these suggestions are made with a view to preventing the adoption of provisions which have been included in proposed regulations published by the Department of the Interior. These provisions, if included in future regulations pursuant to any legislation, would present real problems to the western phosphate mining industry while doing little to enhance the achievement of the reclamation of western phosphate lands.

Both sets of regulations that we have encountered thus far have required the submission of a mining and a reclamation plan before we can even start exploring.

Now in our statement we have noted the things that we don't know before exploration, perhaps the most significant one being that we don't even know whether there is going to be a mine, let alone where it is going to be, how big it is going to be and what kind of overburden disposal area we are going to have.

It is absolutely impossible for us to submit an exploration plan or a mining plan at this stage and we feel that any legislation should prevent this type of a provision from being in the regulations as they pertain to the western phosphate industry.

Furthermore, the regulations that we have encountered thus far have provided that the Department should have the authority to control our exploration activities. In this respect we note that our exploration activities consist of drilling holes and we don't know where the next hole is going to be until we have drilled the last hole. The geologic conditions must dictate where we drill and it is impossible for anyone to say, "Well, you are going to drill over here," when in fact your conditions indicate you must drill some other place.

Another problem we have had has been open-ended regulations which allow the Secretary to come in after we have started our operation and change the requirements and this again is a very difficult problem.

In conclusion the conference asserts that unless some specific standards and limitations are placed in any legislation pertaining to mined land reclamation, the Congress will, in effect, have abdicated to the administrative branch its responsibility for establishing policy.

Pursuant to the unfettered authority which would be given under the present provisions of these bills, a Secretary could insist upon regulations which would have all the problems for the western phosphate industry which the industry has already encountered in the two sets of proposed regulations published by the Department of the Interior. There must be some guidelines limiting the authority of the administrating agency.

The conference again expresses its appreciation for this opportunity to comment on S. 3132 and S. 3126. While the conference believes that adequate reclamation of surface mined western phosphate lands could be accomplished without Federal intervention, nevertheless, the conference offers its cooperation in working together with the committee to draft proposals and changes in the proposed bills which would retain the idea of treating the problems of mined land reclamation on a localized basis, but which would nevertheless establish standards and guidelines to define the power of the administrating agency to impose requirements on the industry, either by Federal or State regulations.

We have already commented about the activity of the Public Land Law Review Commission and we suggest it might be wise to withhold any final consideration of any legislation until this data is available.

Thank you.

(The full statement referred to follows:)

STATEMENT OF DENNIS M. OLSEN, COUNSEL FOR PHOSPHATE LANDS CONFERENCE

ANALYSIS OF PROPOSED LEGISLATION IN CONTEXT OF WESTERN PHOSPHATE MINING

The Phosphate Lands Conference expresses its appreciation to the Committee on Interior and Insular Affairs for this opportunity to present its views pertaining to Senate Bills 3132 and 3126. As is apparent from Mr. Power's comments, the Phosphate Lands Conference has been involved in the matter of mined land reclamation in the context of western phosphate surface mining for almost two years—mostly in conjunction with the promulgation by the Department of the Interior of proposed regulations for the reclamation of federally owned surface mined lands.

During this period of time, the Conference, as it has done today, has pointed out to the Department the peculiarities of western phosphate mining and has emphasized the need of certain protective provisions in regulations or legislation pertaining to western phosphate surface mining. It is in the context of these conditions and this background of past activities that this statement is given.

The Conference reiterates its desire to cooperate in achieving the objective of adequate mined land reclamation. While the Conference believes that the reclamation of western phosphate lands can be achieved without federal legislation or regulation, nevertheless, the Conference respectfully asserts that if there is to be federal intervention, then the regulation and legislation ought to balance the importance of the utilization of mineral resources with the importance of reclamation in order to assure that both objectives are reasonably achieved in an orderly and fair manner.

REVIEW OF PROVISIONS OF PROPOSED LEGISLATION

A. Impossibility of establishing nationwide uniform regulations

Both bills recognize that the regulation of surface mining must take into consideration the conditions existing in a given locality as they pertain to the mining characteristics and minerals involved. The Conference endorses this approach, and in recognition of this situation asserts that the proposed legislation should contain provisions which will insure that these important factors together with the importance of the utilization of mineral resources be given proper consideration in the regulation of surface mining for the purpose of achieving mined land reclamation.

B. Need for standards establishing limits as to what may be required or prohibited

Neither bill establishes any standards which define or limit in any detail the activities which may be required or prohibited.

S. 3132 provides that regulation—whether under federal or state auspices—must "promote an *appropriate* relationship between the extent of regulation and reclamation that is required and the need to preserve and protect the environment." The state plan (or the federal regulations in the event that such become necessary) must contain, under section 7(a)(1)(C) criteria relating specifically to:

> Control of erosion, flooding, and pollution of water,
> The isolation of toxic materials,
> Prevention of air pollution by dust or burning refuse piles or otherwise,
> The reclamation of surface mined areas by revegetation, replacement of soil, or other means,
> The maintenance of access through mined areas,
> The prevention of land or rock slides,
> The protection of fish and wildlife in their habitat,
> The prevention of hazards to public health and safety.

The term "appropriate" establishes no standard whatsoever. What is "appropriate" is apparently to be determined solely by the judgment of the Secretary of the Interior. (§ 7(a)(1))

Thus, under regulations promulgated pursuant to the act, a land owner could be precluded from extracting the minerals from his land if the mining activities even slightly impaired the natural beauty of the land under the circumstances wherein the mining or reclamation activities required by these regulations to preclude the impairment of the beauty would be so expensive as to make the extraction uneconomic. Of course, the same applies with respect to any of the other listed "burdens" in S. 3132. These burdens are set forth in section 3(b) as follows:

"(The) destroying or diminishing (of) the availability of land for commercial, industrial, recreational, agricultural, and forestry purposes, by causing erosion and landslides, by contributing to floods and pollution of waters, by destroying fish and wildlife habitat and impairing natural beauty, by counteracting efforts to conserve soil, water, and other natural resources, by destroying or impairing the property of citizens, and by creating hazards dangerous to life and property."

S. 3126 provides that the Secretaries of Agriculture and the Interior, in establishing federal standards and mining and reclamation requirements, "shall consider requirements which will reasonably assure the attainment of the following objectives:

> "* * * grading, drainage, backfilling, plantings, revegetation, and any other measures or practices deemed by the Secretaries, after consultation with appropriate advisory committees, to be necessary to carry out the purposes of this Act." (§§ 101(a) and 101(b)).

Both bills contemplate that the backfilling of pits could be required even though a pit was in a remote arid region high on a mountain under circumstances which would require the uphill hauling of millions of tons of earth—and despite the fact that there was phosphate ore in the bottom of the pit which advancements in mining technology or future domestic need would make it economically feasible to extract.

The impact of such backfilling on western phosphate mining is tremendous. As illustrated in the report attached to Mr. Power's statement, the increased mining cost resulting from backfilling would eliminate a marketing area of western phosphate fertilizer which now provides one-third of the total sales of western producers and which will, in the future, provide an estimated 50 percent or more of such sales. The loss of this marketing area to western phosphate producers could mean the loss of over 5,000 jobs and 40 million dollars in annual payroll—plus a substantial loss in tax revenue to cities, counties and states in the western phosphate producing area.

The impact would also be felt severely by the private land owner who would be unable to reap the benefit of his investment in the land if the cost of reclamation was so high as to preclude its development. In effect, these bills would allow the taking of his land by the prevention of its use. The unfettered discretion granted to the secretaries to set requirements for mining and reclamation which could result in a loss of use of the land also raises a serious question as to whether

the taking of the land in this manner would meet the requirements of due process of law.

C. Scope of the intent and purpose of the bills

In the absence of any specific standards limiting what may be required or prohibited, the provisions in the bills relative to purpose and intent become even more significant as the anticipated interpretation of the proposed acts in the courts and otherwise is contemplated.

S. 3132 is ambiguous as to the intent and purpose of the act with respect to what may be required of the mining operator in his mining and reclamation activities. Section 3(c) provides that the purpose of the act is to *prevent* and *eliminate* certain burdens and adverse affects. These burdens and adverse affects are set forth in section 3(b) as follows:

"(The) destroying or diminishing (of) the availability of land for commercial, industrial, recreational, agricultural, and forestry purposes, by causing erosion and land slides, by contributing to floods and pollution of waters, by destroying fish and wildlife habitat and impairing natural beauty, by counteracting efforts to conserve soil, water, and other natural resources, by destroying or impairing the property of citizens, and by creating hazards dangerous to life and property."

Section 3(c) indicates that these adverse affects are to be *prevented* or *eliminated* by controlling the mining operations and by specifying certain reclamation activities. The extent of the control over mining methods is nowhere defined, described, or limited.

Reclamation is defined as "reconditioning or restoration of an area of land or water, or both, that has been adversely affected by surface mining operation." (§ 2(b))

It would thus appear that anything which affected the above mentioned attributes of the land must be *prevented* and *eliminated*—implying either than an operator would not be allowed to conduct the activities which would create such burdens and adverse affects, or that if he did create such adverse affects he would have to restore completely the land to its previous state—regardless of the cost. There is no definition as to what constitutes an impairment of natural beauty. Furthermore, there is no allowance given for any slight amount of erosion or minor impairment of the various uses of the land. Section 3(c) simply states that it is the purpose of the act to *prevent* and *eliminate* these adverse affects.

On the other hand, section 3(f) seems to qualify the extent of the action required or prohibited in that it provides for a nationwide program "to prevent *or substantially reduce* the adverse effects to the environment from surface mining," but it goes on to state that the purpose is "to assure that *adequate measures* will be taken to reclaim surface mined areas after operations are completed."

The purpose clauses of S. 3126 also fail to furnish any limiting language. For example, section 2(b) states:

It is therefore the purpose of this Act to provide participation by the Federal Government with State and local governments, private individuals, and other interested parties in a long-range, comprehensive program to reclaim lands and waters damaged by surface and strip mining, to promote an effective continuing conservation land use and management program, and to prevent further detriment to the Nation from such mining operations through—

"(1) The establishment of criteria and standards for the reclamation, conservation and protection of surface and strip mined areas."

In S. 3126 the term "reclamation" is defined to mean "the reconditioning or restoration, when appropriate, of the area of land affected by surface or strip mining operations and such contiguous lands as may be necessary for an effective continuing use and management program, under a plan approved by the Secretaries."

The bills should state clearly that the purpose is to prevent where reasonably possible or to reduce the effects of mining but not to absolutely eliminate any alleged adverse effects. There should be no inconsistency or ambiguity in this regard.

D. Retroactive application

Under S. 3132, the federal or state regulations eventually promulgated could apply retroactively to the pits which were mined prior to the effective date of these regulations.

Although it would appear that it is the intent of S. 3132 to provide for reclamation only of lands affected after the effective date of the act (section 4)—and further even after the effective date of any state plan or federal regulation (section

2(e)), a careful reading reveals that it could be construed to apply to prior operations. Section 4 provides that the surface mined areas shall be subject to the act "after the effective date of the act." However, "surface mined area" is defined as "any area on which the operations of a surface mine are *concluded* after the effective date of a State plan or (the regulations issued by the Secretary), whichever is applicable." (section 2(e)).

A surface mine is defined as:

"(1) An area of land from which the minerals are extracted by surface mining methods, including auger mining,

"(2) Private ways and roads appurtenant to such area,

"(3) Land, excavations, workings, refuse banks, dumps, spoil banks, structures, facilities, equipment, machines, tools, or other property on the surface, resulting from, or used in, extracting minerals from their natural deposits by surface mining methods or the onsite processing of such minerals." (§ 2(d))

Thus, if operations are currently underway on a "surface mine" and these operations are concluded after the effective date of the state plan or regulation, the land affected comes within the definition of surface-mined area and would be subject to the regulations issued pursuant to this act for reclamation.

Furthermore, section 4 provides that a surface mine, the products of which enter commerce or the operations which affect commerce, shall be subject to the act. Under the standard operating procedures of the phosphate industry a given surface mine could include lands affected both before and after the effective date of the act. The act does not distinguish between those portions of the surface mine worked before the act is effective and those which are worked after the effective date of the act, and thus the whole mine could be included within the coverage of the act and the regulations promulgated pursuant thereto.

The definition of "surface mined area," in S. 3132 should provide that it includes only the area of a surface mine on which mining operations are commenced rather than concluded after the effective date of the state plan or federal regulations.

S. 3126 is broader in scope and approach in that it establishes programs for the reclamation of previously affected mined lands as well as lands affected in the future. As to future surface mining operations section 101 provides:

"The Secretary of Agriculture and the Secretary of the Interior shall develop or revise, after consultation with the national advisory committee appointed pursuant to section 6(a) of this act . . . (2) Federal standards, and mining-reclamation requirements for the administration and regulation of all future surface and strip mining operations in the United States * * * (b) in establishing Federal standards, and mining and reclamation requirements for the administration and regulation of future strip and surface mining operations in the United States, the Secretaries shall consider requirements which will reasonably assure the attainment of the following objectives:

"(1) The standards shall include, but not be limited to grading, drainage, backfilling, plantings, revegetation, and any other measures or practices deemed by the Secretaries, after consultation with appropriate advisory committees, to be necessary to carry out the purposes of this Act.

Nothing is said in the act as to whether or not the standards and requirements established pursuant to the act shall apply to land affected after the act becomes law and up to the time of the adoption and effective date of either federal or state regulations. However, the wording of the act is such that these requirements could be construed to apply during this period of time. Consequently, a person performing mining operations during this time would have to do so without knowing what reclamation he would be required to do and thus would be unable to determine the cost of his operations until the regulations were effective.

Both acts should stipulate that only those portions of a surface mine which are opened up and the waste disposal areas resulting therefrom after the effective date of the state plan or federal regulations would be subject to those regulations.

E. Broad discretion given to Secretaries

Several sections of S. 3132 allow the Secretary of the Interior to act or make determinations based solely on his judgment or based upon what the Secretary "deems necessary"—resulting in the Secretary having unfettered discretion which

may preclude any effective judicial review of these actions. Examples are as follows:

Section 5(c) makes any payments by the federal government to the state contingent upon the administration of the state program "in the manner which the Secretary deems adequate." Section 7(a)(1) provides that the Secretary may approve a state plan if he determines that "in his judgment" the plan includes laws and regulations which meet certain requirements.

Section 7(b)(1) allows the Secretary to issue federal regulations if a state "in his judgment" has not taken adequate measures to correct any failures on the part of the state.

Section 8(b) provides that any proposed federal regulations shall first be published in the Federal Register and be subject to comment. Thereafter, the Secretary may issue the regulations with "such modifications, if any, as he deems appropriate."

Section 8(c) provides for a public hearing on objections, but there is no limitation on the authority of the Secretary to approve or disapprove any proposals that are discussed during the public hearing.

Section 11 allows the Secretary to issue such regulations as are "deemed necessary" to carry out the purposes of the act.

Section 101 of S. 3126 grants very broad powers to the Secretaries of Agriculture and Interior to establish federal standards and mining and reclamation requirements for the regulation of surface and strip mining operations.

In the past, the Department of the Interior, for example, has taken the position (which has in some instances been upheld by the courts) that certain action of the Secretary are not subject to judicial review. Furthermore, when judicial review was permitted, statements in legislation or regulations pertaining thereto which granted the Secretary the authority to act based solely on his judgment made the reversal of any such actions almost impossible to obtain. Legislation on the matter should specifically provide that any action of a Secretary is subject to judicial review and that the judgment of the Secretary is not to be the sole criteria in determining whether or not he has acted properly.

F. Advisory committees

Section 6(a) of S. 3126 apparently allows each Secretary to establish his own regional advisory committee. It would seem that one advisory committee should be ample to serve both secretaries. All proceedings of the advisory committees should be open to the public. The conclusions and recommendations and the reasons therefor should be a matter of public record and available for consideration in the event that any action of the Agriculture or Interior Department is challenged.

G. Control of mining methods

Both bills not only stipulate that certain reclamation activities will be required, but also provide for the regulation and control of the extraction or mining methods as well. (S. 3132 § 7(a)(1)(B); S. 3126 §§ 101(b), 101(b)(5)). The Phosphate Lands Conference asserts that adequate reclamation of western phosphate lands can be achieved without outside interference with extraction methods. Due to the peculiarities of western phosphate beds extraction plans often have to be changed with practically no notice. Delays and other problems incumbent in submitting and obtaining approval of extracting methods would create an onerous and unnecessary burden on the person engaging in the mining activity.

Overburden and ore must be removed as part of the mining operation. In western phosphate mining the method used in doing this is irrelevant from the standpoint of reclamation of the land. The economics of the operation and the variations in mining conditions require that the operator be allowed to utilize the extraction methods dictated by these conditions and not by a party having no economic responsibility for the success of the operation.

H. Civil and criminal penalties and other judicial remedies

Both bills provide for criminal as well as civil penalties for failure to comply with regulations. In view of the day to day problems which often compel immediate changes in mining plans and in view of the extent of control over mining activities contemplated by the bills, the mining operator is placed in a very tenuous position when he cannot change his mining plans without being subject to criminal and civil penalties even if the change in plans results in no appreciable damage. A civil penalty based on provable damages resulting from a violation

would be understandable. It is difficult to justify the assessing of civil and criminal penalties regardless of damage.

S. 3132, in addition to providing for civil and criminal penalties, also permits a civil action to be commenced in a federal District Court for a restraining order or injunction or other appropriate remedy to:

"Prevent a person from engaging in surface mining operations without a permit from the Secretary * * * or in violation of the terms and conditions of such permit,

"To prevent a person from placing in commerce the products of a surface mine produced in violation of an approved State plan,

"Or to enforce a right of entry."

The remedy preventing a person from putting his products into commerce could result in the closing down of a total operation, including not just a mine but all the plants dependent upon the mine. No restriction is placed on the use of this power. It is available with respect to the slightest violation—regardless of whether or not any actual damage results or is apt to result from the prohibited action. If such a remedy is to be available at all, it should only be permitted when substantial irreparable harm is apt to occur.

I. Coordination among Federal agencies and problems of conflicting Federal and State authority

S. 3126 is to be administered by the Secretary of Agriculture and the Secretary of the Interior. Although there are some areas where specific responsibilities are assigned to the Secretary of Agriculture and other specific responsibilities are assigned to the Secretary of the Interior, generally speaking the matters pertaining to the promulgation and enforcement of federal standards and mining and reclamation requirements are under the joint control of the two secretaries. Such dual control by the two departments is almost sure to lead to conflicts resulting in a situation where a person would not know what instructions to abide by. Apparently the mining operator would have to have the approval of both secretaries as to the activities which he would have to perform pursuant to the regulations. Thus, one Secretary could effectively block action approved by the other. Also, an adverse decision would have to be appealed through the organizations for both secretaries.

Section 16 of S. 3132 allows the Secretary of the Interior, or the heads of other federal agencies to include in federal leases, permits, contracts, etc. such conditions as they feel necessary to regulate surface mining operations and to reclaim surface mined areas under their jurisdiction. Thus, an operator would be subject to the provisions of his lease and also any regulations promulgated pursuant to S. 3132. This again would lead to conflicts. It would seem appropriate to provide that the authority of the federal agencies is limited to the regulations which they may promulgate pursuant to this act—thus avoiding the conflicts which would otherwise occur.

It should be noted that other federal and state agencies have overlapping authority which could lead to conflicts. For example, the control of water pollution is largely a state activity.

The U.S. Geologic Survey has also historically performed certain conservation responsibilities with respect to surface mining.

Any legislation should contain provisions for avoiding conflicts among the various federal and state agencies.

J. Right of appeal

S. 3132, while specifically granting to the Secretary of the Interior the authority to instigate judicial action as noted above, contains no provision allowing a person to challenge the action of the Secretary in the courts. Also, there is no provision in the bill for appeals within the Department.

S. 3126 provides for appeals within the departments and also for the judicial review of final decisions of the secretaries. With respect to interdepartmental appeals, section 102(c) provides:

"Any person or operator whose application for a license or permit has been denied by the Secretaries, or whose bond has been ordered forfeited by the Secretaries, or who has otherwise been aggrieved by an action of the Secretaries, pursuant to the provisions of this Act, may appeal to the Secretaries for annulment or revision of such order or action, and the Secretaries shall issue regulations for such appeals which shall include due notice and opportunity for a hearing."

The interdepartmental remedy to contest the decision of a Secretary is to appeal to the Secretary. Thus, the Secretary makes the initial adverse decision and then sits in judgment on the appeal from that decision. Certainly fair play would require that interdepartmental appeals and hearings be held before an examiner who is independent of the department in question and who would be authorized and required to make findings of fact in each case.

Under S. 3126 a person appealing a final decision must file his notice of appeal within 20 days. While the large mining company may have a staff which will be aware of this short appeal time, experience dictates that a small operator—due to the many pressing problems which he has—oft times is not aware of the fact that he must appeal within a certain period of time until it is too late. There is no reason for establishing such a short period of time for the filing of a notice of appeal.

The appeal provisions of S. 3126 provide that the appeal must be taken to the Circuit Court, and if there is substantial evidence in the record to support the findings of fact of the Secretary, his findings will be accepted. Past experience in administrative hearings subject to this type of review, illustrates that almost anyone can get enough evidence in the record to support the findings of fact. The usual rules for admission of evidence are not applicable in these administrative hearings, and thus it is almost always possible to get evidence of some kind in the record to support the findings. Furthermore, the courts have consistently followed the doctrine in such cases that the federal administrators have expertise in their particular field and their decisions are thus given great weight—particularly where the appeal procedures provide that the findings of the administrator need only to be supported by some evidence in the record.

It is respectfully submitted that a person seeking judicial review should have the option of either proceeding with an appeal to the Circuit Court or to have a trial *de novo* in a Federal District Court.

It is further suggested that any departmental decision should be considered to be a final agency action subject to judicial review if it is made effective pending a departmental appeal of the decision.

K. Authority of States

Both acts provide that the regulation of surface mining will be left to the states, provided the states proceed in accordance with standards set by the federal government.

Under S. 3132 the determination of whether or not a state is proceeding satisfactorily rests solely within the judgment of the Secretary. As has been previously noted, this bill sets forth no standards or limitations governing the action of the Secretary. This situation also exists with respect to the authority of the Secretary in determining whether or not a state is meeting the federal standards. While the Phosphate Lands Conference believes that the western states can amply handle the problems of reclamation of surface mining, it respectfully submits that if legislation is to be adopted allowing the states this authority only if they meet federal standards, then there ought to be some kind of guideline or standard governing the action of the Secretary in his determination of whether or not a state is meeting the federal requirements.

S. 3126 provides for an appeal of the Secretary's decision; however, the appeal again is to the Circuit Court with a proviso that if there is substantial evidence in the record to support the Secretary's findings, then these findings shall be conclusive. It is respectfully submitted that a state should have the option of seeking a trial *de novo* in a Federal District Court. It would seem that in such circumstances the determination of a state administrator is entitled to as much respect from the standpoint of expertise as is the decision of a federal administrator and any appeal should be made in circumstances which would give each party equal opportunity to prevail.

SUGGESTED ADDITIONAL PROVISIONS

The foregoing comments have been directed primarily to a critique of the provisions in the two bills. In some instances, the comments have indicated provisions which might be included in the act. The following constitute additional provisions which the Conference respectfully suggests be considered for possible inclusion in the proposed legislation—at least as it may pertain to western phosphate mining. To a large extent, these suggestions are made with a view to preventing the adoption of provisions which have been included in proposed regulations published by the Department of the Interior which if included in future

regulations pursuant to any legislation would present real problems to the western phosphate mining industry while doing little to enhance the achievement of the reclamation of western phosphate lands.

A. Submission of a plan for operation prior to commencement of exploration operations

Any legislation should forbid any requirement for the submission of a plan of operation prior to the commencement of exploration activities.

While the Phosphate Lands Conference, as indicated in the proposed regulations submitted by it to the Department of the Interior, believes that the most feasible approach to the reclamation of surface mined lands is to have a plan for reclamation submitted and approved, it is virtually impossible to have such a plan submitted and approved before exploration is commenced.

Prior to exploration, no one knows what extracting operations will be conducted, if any, on the lands in question. Large areas containing phosphate deposits are classified as subject to the leasing provisions of the mineral leasing act, notwithstanding almost a total lack of knowledge of the extent, attitude, quantity, quality, mineability or workability of the deposits. At the time of the commencement of exploration activities, neither the United States nor the mining company possesses any appreciable knowledge about the nature of the mineral deposits on the leased lands. For example, it is impossible to determine:

(*a*) The precise location of the proposed mining operation.
(*b*) The area where the overburden will be stored.
(*c*) The amount of surface that will be destroyed.
(*d*) The nature of the excavation that will be necessary in order to obtain the ore.
(*e*) The size of the piles of removed overburden and their location and design.
(*f*) The nature and extent of erosion problems, if any.
(*g*) What livestock operations might be interfered with.
(h) What streams, if any, will be interfered with.
(*i*) What crops, including foliage, timber, etc. will be disturbed, and the extent thereof.
(*j*) Size and types of equipment to be utilized for exploration, development, or extractive operations.
(*k*) Capacity, character, standards of construction, size and location of structures and facilities to be built.

It is impossible at the time of the commencement of exploration activities to determine what steps will have to be taken in order to remove the ore. Consequently, it would not only be impossible to describe these operations, but, in addition, it would be impossible to determine what reclamation activities would be needed.

Although it must be recognized that unexpected situations may arise at any time during the course of mining which would alter the factors referred to above, an effort should be made to arrive at the most opportune time for the determination of the activities to be undertaken in the furtherance of mining according to good and miner-like practices and with a view to conserving the other resources. It is suggested that the most opportune time to make such a determination is shortly before mining commences in a given area.

b. Authority to control exploration activities

It is recommended that provisions be inserted in any legislation which would prevent interference with exploration activities.

Exploration activities performed in western phosphate mining which would disturb the surface consist largely of digging comparatively small trenches and drilling exploration holes. Regulations previously proposed by the Department of the Interior require the operator to present to the Department a plan of his operations including where holes will be drilled, etc. and further granted to the Department the authority to designate changes in these plans and thus control where holes would be drilled and trenches dug.

In phosphate exploration or mining, it is impossible to "control" the location of drill holes. The location of a given hole is determined by geologic conditions. In the process of exploration, the lessee must be allowed to drill where his training and experience in the light of geologic conditions indicate he should. In most instances he does not know where his next drill hole should be until he has completed his last drill hole—and the time lapse may be a matter of hours. This is

true, both as to exploration conducted to determine the presence of phosphate under a phosphate prospecting permit and as to exploration done after the granting of the lease for the purpose of determining how the ore body lies and its phosphate content. Since it is impossible to plot in advance the location of drill holes, if the regulating agency were to dictate the location of such drill holes, it would be necessary to either have a representative from the agency on the scene when the drilling was taking place or to have the lessee obtain permission to drill each hole. It is submitted that both procedures are impractical and in fact, unnecessary inasmuch as the location of such holes is determined by geologic conditions, and the lessee for economic reasons will not drill any more holes than is necessary. Reclamation of the areas affected by exploration activities could be accomplished without the submission of a plan of operation prior to commencing the exploration activities by establishing the requirements for such reclamation in the regulations.

C. Open end regulations

Regulations with an "open end" allowing the regulating agency to change unilaterally the obligations of a mining operator should be forbidden. Otherwise, the operator would never know what costs might be added as a result of the changes. In such circumstances, it would be practically impossible, particularly for a small operator, to obtain a bond inasmuch as the bonding agency would not know the extent of its exposure.

D. Time limits

Any regulations adopted should contain time limits within which the regulating agency must act on proposed plans submitted by an operator. An operator must be able to program his plans for operation, and extensive delays may result in a failure of the enterprise with the resulting loss of investment.

CONCLUSION

In conclusion the Conference asserts that unless some specific standards and limitations are placed in any legislation pertaining to mined land reclamation, the Congress will, in effect, have abdicated to the administrative branch its responsibility for establishing policy. Pursuant to the unfettered authority which would be given under the present provisions of these bills, a Secretary could insist upon regulations which would have all the problems for the western phosphate industry which the industry has already encountered in the two sets of proposed regulations published by the Department of the Interior.

There must be some guidelines limiting the authority of the administrating agency. Otherwise the industry will find its mining methods being dictated by the agency without any opportunity or basis for challenging its authority. With no limitations in the statute, the mining and reclamation requirements would be subject to change with every change of administrative officer.

The Conference again expresses its appreciation for this opportunity to comment on S. 3132 and S. 3126. While the Conference believes that adequate reclamation of surface mined western phosphate lands could be accomplished without federal intervention, nevertheless, the Conference offers its cooperation in working together with the Committee to draft proposals and changes in the proposed bills which would retain the idea of treating the problems of mined land reclamation on a localized basis, but which would nevertheless establish standards and guidelines to define the power of the administrating agency to impose requirements on the industry, either by federal or state regulation.

It should also be noted that the Public Land Law Review Commission is currently reviewing the laws, regulations and problems involving public lands, including phosphate lands. It is anticipated that a substantial amount of data will be obtained in conjunction with this study. The Conference suggests that it might be wise to withhold final consideration of any legislation until this data is available.

Senator METCALF. We want to thank you for your statement.

Senator JORDAN. Thank you, gentlemen, for what I believe is a very profound and accurate statement of the troubles I know beset the phosphate industry of the West.

It seems to me that there is a basic misunderstanding here between those of you who are operators and those of the executive branch who

are administrators to the geology that is involved here in this phosphate mining area.

You brought out the fact in your statement, Mr. Power, that these deposits of phosphate were laid down on a horizontal plane, as a layer at the bottom of a great lake millions of years ago. At that time they were horizontal because they were deposited by water action. They were level on a horizontal plane.

Then in the thousands and millions of years that followed, with the buckling of the Rocky Mountains and the twisting and upheaving of the earth's surface, this horizontal plane of phosphate was broken and twisted and warped so that there is no continuity. Isn't that what we are saying here?

Mr. POWER. Yes, sir.

Senator JORDAN. Isn't it true that the regulations promulgated by the Department of the Interior completely disregard this geological basic fact which you so carefully enunciated for us today?

Mr. POWER. Yes, sir.

Senator JORDAN. Isn't it a fact, too, from the testimony you have given here, that it would be quite impossible, under the circumstances obtaining there, for you to file a preliminary plan of operation, a detailed program as to precisely how you are going to do it well in advance of actual exploration or construction?

Mr. POWER. It is impossible.

Senator JORDAN. Mr. Chairman, it seems to me that the main difficulty here is the fact that the legislation is tailored for a situation which has no reality to the circumstances that obtain in western mining of phosphate and in other situations as well. I think all of us want to see a restoration and reclamation of these lands but we want to see a viable mining industry. We do not want to see it destroyed. I think under the regulations and the stipulations that have been handed down by the Secretary and by the straitjacket that is set up in the provisions of this bill, we are going to have great difficulty in maintaining any mining industry at all in some of these areas.

Now I want to talk about some other matters. I am astounded, as you recount, at the various contacts you have had with the executive branch starting on May 7, 1966, with the regulations they have published in the Federal Register, your reply to that, and then further regulations published over a year later completely disregarding your communications to them; your coming back here and finding that you have to start anew with a new set of people and explain in detail the difficulties which beset your operations; and now I understand you have had no formal reply to your last communication.

Mr. OLSEN. Senator, on that matter, in deference to the Department we did have a chance to go over our comments with them but that was the end of it. We do not want to give you the idea that they brushed us off. They did listen. However, we understand that there are regulations coming out within the next month and we have no idea what they will contain.

Senator METCALF. Senator Church, and by his request the committee, has asked for written comments, a written statement and written responses to your objections and they will be presented to you and they will also be kept in the files of this committee.

Senatorr JORDAN. We appreciate that, Mr. Chairman.

Senator CHURCH. Will the Senator yield for clarification?

Senator JORDAN. Yes, indeed.

Senator CHURCH. It is possible that the revised regulation the Department presumably intends to promulgate will take into account many of the arguments you have presented to us.

Mr. EMIGH. We hope that is the case, Senator. We have not seen them.

Senator CHURCH. I have had communications with the Secretary because of the importance of the phosphate mining industry in Idaho and the impact it was feared that the proposed regulations would have on the industry. Presumably these arguments have been taken into account by the Department in the process of its review of the original regulations. Now what the result of this will be we won't know until we see what the revised regulations are. But that is where we stand at the moment vis-a-vis the Department; isn't that correct?

Mr. EMIGH. That is correct.

Senator CHURCH. Thank you.

Senator JORDAN. I want to get into the economics of the things a bit with Mr. Power.

Mr. Power, in your statement you dealt with economics somewhat. You heard me ask other witnesses what the surface condition of the land was and what use it was put to before the mining operation was commenced and to what economic use the land was put after the body of ore was extracted, and what would it be useful for.

You heard me ask for a delineation of the economic resources that were removed, that were taken out in the mining operation.

I now ask this question of you: You said in your statement: "We have contributed millions of dollars of cash flow to the people of our States in the form of payroll, taxes, supplies, and purchase of power, railroad rate, and so forth. In 1967, our annual payroll was $122 million."

That is only 1 year, Mr. Power. Is that an average year?

Mr. POWER. Yes.

Senator JORDAN. How many years has the industry been operating?

Mr. POWER. We started about 20 years ago. Of course, 20 years ago we were starting to grow. So it would not have been that high at that point.

Senator JORDAN. This would hardly be average then. You would have come up from a small beginning to an annual payroll of $122 million in 1967?

Mr. POWER. That is right, sir.

Senator JORDAN. "* * * our plant investment directly related to western phosphate was in excess of $654 million over the Nation."

Mr. POWER. That is correct.

Senator JORDAN. " * * * out of this we have disturbed in the past 20 years, 1,781 acres, all of which will eventually be reseeded."

Now in our western area, to what use was this land put before you started disturbing the surface?

Mr. POWER. This land is basically cattle and sheep country.

Senator JORDAN. With a carrying capacity of about one sow to 20 acres?

Mr. POWER. Senator, I have been in the cattle business for 25 years along with mining. My estimate is that the 1,781 acres we have dis-

turbed would carry 200 head of cattle, for about 5 months of the year.

Senator JORDAN. After you disturbed the 1,781 acres with your $112 million a year payroll and a tremendous plant investment and the taxes you pay, after you are finished with the operation then to what use will this land be put?

Mr. POWER. We have been reseeding in cooperation with the Department of Agriculture, the Forest Service, for 2 years. We are finding that our reseeding increases the availability of forage for cattle and sheep.

Senator JORDAN. In other words, the restored lands, the land that you have reclaimed, will have a higher carrying capacity than the lands in nature's state before they were disturbed by your surface operation?

Mr. POWER. That is correct, Senator. Basically, this is sagebrush land and in the mining, of course, we do destroy the sagebrush which takes moisture from grasses. Then when we reseed we put in straight grasses which are much more satisfactory for grazing purposes.

Senator JORDAN. Thank you, Mr. Power.

Now, Mr. Olsen, you have gone more into the technicalities of the legislation and I assume that you have amendments to suggest or will suggest amendments.

Other witnesses have testified as to the need for a judicial review by all means. You have included that among your recommendations. Assuming you are going to get a bill, would you provide us with the amendments you think are necessary to make it so that you could live with it in your industry?

Mr. OLSEN. We certainly would, Senator. We would be pleased to do just that.

Senator JORDAN. Very good. That is all I have.

Senator METCALF. Senator Church.

Senator CHURCH. One thing that concerns me very much about this legislation is the scope of authority that is placed in the Secretary's hands without statutory safeguards.

Now if we proceed by the legislative route, this committee should take into account your testimony here and consider appropriate revisions in the bill that will both accomplish the public objective of land reclamation and pollution control and at the same time impose no arbitrary or unreasonable burden on the industry in continuing to conduct mining operations.

If we don't proceed by the legislative route and the Department promulgates regulations, then what these regulations contain in the last analysis depends on what the Secretary of the Interior determines they should contain.

Isn't that correct?

Mr. EMIGH. That is correct.

Senator CHURCH. If the power asserted by the Secretary of the Interior is of a plenary form, or if it rests upon the assumption that he has complete power, then inherently, by virtue of the fact he is proprietor of the public lands, without the intervention of Congress the industry is at the mercy of the Secretary of the Interior; barring a court case that would contest the Secretary's assertion of such power.

Isn't that correct?

Mr. OLSEN. That would be correct, Senator.

Senator CHURCH. What I am trying to probe for is some assessment on the part of you gentlemen who represent the industry as to whether in your opinion it is more desirable to try to work out with the Department of the Interior regulations that you can live with and which are also acceptable to the Secretary, or whether you think the best interests of the industry lie in the direction of Congress asserting its fundamental authority in this field and establishing, through legislation, the general guidelines that would control the Secretary's action?

Mr. OLSEN. Senator, this is a question which I think we would almost have to answer at a future time. As of now, we are still hopeful of being able to work out something satisfactory with the Secretary of the Interior, based largely on the comments which he made here yesterday morning relative to what his intentions are.

I know that he stated that it was not the intent to completely eliminate the effects of mining on the land. I noted that he also stated it was not his intent to require backfilling unreasonably. It would seem to me that with that common intent we should certainly be able to work something out with him which is going to be satisfactory to everyone. We intend to continue that course and strive our very best to accomplish it in that manner. What the future holds, we cannot say. Therefore, to commit ourselves either way at this point I think would be impossible.

Senator CHURCH. In other words, I interpret your answer to my question as you want to see what the regulations are first before you decide to jump one way or the other.

Mr. EMIGH. May I comment?

Senator CHURCH. Yes, certainly.

Mr. EMIGH. We in minerals are in a strange position here. We are subject to the Interior, and are also subject to the proposed bill. It applies to us as well as to anybody mining on fee lands. We are also subject to the Department of the Interior's regulations. We recognize the problems they have. We still feel in our conference that many of our problems with the Interior have been their lack of understanding of our problems. We thought that was overcome twice. It turns out it wasn't. We are looking forward to these proposed regulations to come up in a few days. In our case we have to work with the Secretary.

Senator METCALF. I think it should be made clear, Senator Church, as part of this discussion, as I understand it, the western phosphate mines are largely on Federal land.

Mr. POWER. That is correct.

Senator METCALF. So, you are not in the situation that they are in Florida, for example, where they are operating on private land?

Mr. POWER. That is correct.

Senator CHURCH. I think you are at the moment in a position where you have to wait and see. I think that this committee ought to also defer any decision as to the pending proposal until we have had an opportunity to examine the proposed regulations and determine what they are going to involve. I hope that we will be in a position to do that sometime soon.

Senator Jordan's questioning brought out very clearly the tremendous economic values that are represented in the mining activity as compared to what the land, itself, would sustain in its natural state. I think that is a very dramatic contrast. After all, we are all engaged

in making a living. This industry makes a very significant contribution to that process in the West.

The objective of the Secretary in protecting the public interest, it seems to me, is twofold. One, to prevent unnecessary erosion of the land following mining operations and the pollution of water that might be involved, although in the phosphate mining industry this is not as great a problem as it is in other kinds of mining, and two, the reseeding of the land so that it can again sustain wildlife and cattle and sheep.

All of this is entirely proper. I have been greatly concerned in my years in the Senate that proper conservation be practiced by the Government. It is a part of the responsibility that the Government owes to all its people.

We have seen some reckless and irresponsible ravaging of the land by mining companies. We have seen it in the West, in my State, where beautiful upland mountain valleys which were of great value and of recreational use to the people, were simply destroyed by dredging operations that left piles of sterile rubble, all for the purpose of some transitory profit made in reckless mining ventures. Such an attitude and such action cannot be justified. In many ways that has led public opinion to be quite adverse to mining as a whole because people see these examples of outrageous destruction and conclude that that is representative of what happens when the mining starts. I think that has had an unfortunate impact on the whole mining industry because certainly that is not representative of the way in which the responsible mining companies are attempting to conduct their business these days. But I think it leads to the swinging of the pendulum to the opposite extreme and to widespread support of regulations which might go much farther than the public interest really requires: punitive regulations against mining.

I think it is the duty of this committee, which has both the conservation and recreation interests of the country to protect, as well as the mining industry, to see to it that a proper balance is struck.

I hope, Mr. Chairman, that we will continue to pay close heed to the proposed regulations of the Department of the Interior that should be forthcoming soon and to follow this along in such a way that we can reach a working arrangement that will both protect the reasonable interests that the public has in the proper conservation of the lands concerned and also permit the industry to go forward with the kind of operations that contribute so much to the economy and the well-being of the people of our State.

Thank you very much.

Senator METCALF. Thank you, Senator Church.

I, too, want to thank you, again, for a description of your industry and this legislation and the regulations which the Secretary can put into effect upon leasing of the public lands that would affect you.

I know that I do not have to dwell on the subject that Senator Church has mentioned. This committee is composed of men who are as sympathetic to the mining industry as you can find anywhere in the United States.

We are concerned about your welfare and the welfare of our constituents. You have made a tremendous contribution to the development of resources of our area.

We are also pleased that this hearing has brought out the enlightened possibility on the part of many miners so that the abuses that Senator Church has mentioned which we can view any time we drive on highways in Montana and Idaho and Utah and Washington and all over the West, are no longer in existence.

We do have a concern over the public interest to see that these abuses do not continue. We have a concern with the development of proper appeals, security of basic rights, passage of constitutional legislation, all of which we have tried to raise in the course of this hearing.

We are grateful to you for bringing this to our attention so far as your particular industry is concerned.

Senator Burdick, do you have some comments?

Senator BURDICK. No. I arrived late but I assure them I will read the testimony.

Senator METCALF. Thank you very much.

Mr. EMIGH. Thank you, Mr. Chairman.

Senator METCALF. Gentlemen, we have been here for more than an hour this afternoon. We have heard only one witness. I hope that as these hearings have developed we have had a lot of repetition and many of the points have been covered.

Again, I reiterate your statement will be printed in full in the record. So try to summarize and bring up new material.

The next witness is Mr. Jarle Leirfallom, commissioner of conservation, State of Minnesota. You have a companion, Mr. Lierfallom. We are delighted to have you with us.

STATEMENT OF JARLE LEIRFALLOM, COMMISSIONER OF CONSERVATION, STATE OF MINNESOTA, ACCOMPANIED BY EUGENE JERE, DIRECTOR, DIVISION OF WATER, SOILS, AND MINERALS

Mr. LEIRFALLOM. Mr. Chairman, members of the committee, the green brochure you have is the statement of Gov. Harold Le Vander which he has asked me to present on his behalf because while he was planning to come here he was unable to come. I am appearing in his stead.

Senator METCALF. We would be pleased to have Governor Le Vander, but we are glad to see you.

Mr. LEIRFALLOM. My name is Jarle Leirfallom. I have with me Eugene Jere, Director of the Division of Water, Soils, and Minerals, of Minnesota. We have in Minnesota a department of conservation that combines substantially all of the natural resources in one department.

Because time is short, Mr. Chairman, I am going to merely abbreviate this report. It has its own exhibits that are self-explanatory: Some good maps of the very interesting Mesabi Range, some brochures in the back that show some of the positive values that are created by mining and are advertised as tourist attractions and these sorts of things. In my brief summary I want to say, Mr. Chairman, that Minnesota is a State of great natural beauty and the Nation's largest producer of iron ore.

We are, therefore, vitally interested in any legislation that could affect the iron mining industry and thus the economy of the State.

As the second largest industry in Minnesota, iron mining has long played an important role in the entire economy of the State. The related industry and services it supports magnifies its economic importance to the State.

Minnesota is noted for its huge iron ore reserves and its active iron mining industry, which has produced over 60 percent of all the iron ore mined in the United States. During the 84-year history of iron mining in Minnesota, 2.8 billion tons of natural ore and concentrates have been produced.

At present, the capital investment relating to Minnesota taconite iron ore alone is over $1 billion. Plant capacity in the State now exceeds 32 million tons of high-grade ore pellets per year, with the prospect of a substantial increase in the near future. This represents over 65 percent of the total U.S. pellet plant capacity.

With mineral rights in over 5 million acres of trust fund land and millions of acres of tax-forfeited land, the State is the largest single mineral fee owner in Minnesota. Over 400 million tons of iron ore have been produced from State-owned properties. The revenue derived from the trust fund properties is dedicated to the support of public schools, State universities, and other public institutions. The State's permanent trust funds now total over $300 million.

In addition to its vast mineral ownership, the State has done much to encourage private development through public investment in research and by enactment of laws encouraging the growth of the industry.

Minnesota's main iron ore reserve, the Mesabi Range, represents the Nation's largest assured source of this vital raw material. The physical characteristics of the iron formation are such that in the interests of good mineral conservation, open pits must remain "open" for greatly extended periods, and lean ore materials stockpiled for future use.

Most of the presently existing stockpiles and inactive open pits will be reworked in the future in conjunction with magnetic and nonmagnetic taconite operations. With open pit reserves of approximately 45 billion tons of crude magnetic taconite and a nearly equal amount of nonmagnetic taconite, and the prospect of vast underground taconite reserve also being developed, there is no foreseeable end to mining on the Mesabi Range.

However, with growing competition for capital investment in iron mining from Canada, South America, Africa, and Australia, we must be increasingly concerned with any congressional action which might jeopardize or affect the competitive position of Minnesota.

While broad nationwide surface mining regulations may reduce the likelihood of one State being placed at an economic disadvantage among the other States due to its reclamation efforts, the hazard of Minnesota's or the Nation's iron mining industry being placed at a competitive disadvantage internationally must be considered and avoided. Iron ore from foreign countries provides Minnesota's primary competition.

In addition to iron mining as an industry, the iron range has become a major tourist attraction in northern Minnesota. The large open pits, enormous taconite plants, mountainous stockpiles, and colorful history have drawn many tourists to the area.

The communities of the range have shown a keen interest in encouraging tourists to visit the area by establishing such facilities as the Museum of Mining at Chisholm, the Two Harbors Park, featuring objects relating to transportation in the mining industry, mine viewpoints, and many others.

Minnesota's oldest underground mine at Soudan has now been converted into a State park. Tours, both on the surface and 2,400 feet underground, provide visitors at the park with an accurate interpretation of underground mine operations. The State is presently investigating the feasibility of establishing an open pit State park.

The mining companies have served the tourist by establishing mine viewpoints, conducting plant tours and establishing recreation areas on water impoundments created to supply water for the taconite plants.

Minnesota is aware of the many aspects of mining effects upon our environment and we have already instituted action.

Water pollution due to mining, a major problem to much of the mining industry and the country, is practically nonexistent in Minnesota. Through the cooperative efforts of State agencies and the mining industry, plant waters are recirculated through closed-circuit systems, and large settling basins have been established to handle any discolored mine waters. The Strip and Surface Mine Study Policy Committee of the Department of the Interior recognized this fact in their report "Surface Mining and Our Environment" by stating, "The minerals in the formations are chemically inert and the terrain is flat; thus the mining operations cause little or no water pollution."

The Department of Conservation is presently conducting research directed toward improving the quality of taconite plant water. If successful, this will further reduce the water pollution potential and will also decrease the amount of fresh makeup water required for taconite processing.

The mining industry has shown an awareness of the problem by conducting experimental planting on surface dumps, tailings basins, and stockpiles. Tailings basins have generally been placed in areas which would be least detrimental to our natural resources and screened from public view except by air. Research is presently being conducted to rejuvenate tailings basins to allow vegetation growth by fertilization and soil conditioning.

There is a vast difference between iron mining in Minnesota and coal mining in other areas of the country. In most coal operations, mining in a particular area is completed in a relatively short period of time with the operator moving on to other areas with no reason to return.

Due to the immense reserve and the structure of the formation, iron ore mining in Minnesota is a very stable industry, and the mining area will not be exhausted in the foreseeable future.

Only in the southeastern part of the State, in the Fillmore County area, where small, shallow iron ore deposits occur, does a situation similar to coal mining exist. In this area it has long been the practice to return the area to its natural condition upon completion of mining.

By contouring and replacement of the topsoil, farm crops are being raised on the mined-out areas shortly after mining operations are concluded.

The State, in establishing rules and regulations for its infant copper-nickel industry, recognized the pollution and environmental control problems that could develop. As a result, the State leases contain provisions for protection of the environment and for reclamation.

Our State is concerned about the problems that this bill attempts to deal with. We are not negating the intent of this bill.

The State's concern for the effects of mining on our environment is further demonstrated by the fact that the department of conservation, which I head, has selected specialists in the fields of minerals, waters, forestry, game and fish, and parks to collectively study the problem for the purpose of making recommendations for the prevention of blight and restoration of mined lands. Meetings have also been held with mine officials and specialists to study and define problem areas.

The study committee is especially concerned with long-range problems relating to mine waste disposal, the stockpiling of lean ores and taconite, and future uses of exhausted pits. These preliminary efforts have been met with cooperation and success, and other State agencies have indicated their willingness to assist in studies and research.

We feel strongly that Minnesota is best qualified among all of the 50 States to cope with the unique problems associated with surface mining of its iron ore, problems which are identified and which are being worked on, and which no other State confronts to the same degree as Minnesota.

The State, therefore, agrees with those purposes of S. 3132 found in section 3, which read as follows:

> "(d) That, because of the diversity of terrain, climate, biologic, chemical, and other physical conditions in mining areas, the establishment on a nationwide basis of uniform regulations for surface-mining operations and for the reclamation of surface-mined areas is not feasible;
>
> "(3) That the initial responsibility for developing, authorizing, issuing, and enforcing regulations for surface-mining operations and for the reclamation of surface-mined areas should rest with the States; and
>
> "(f) * * * to assist the States in carrying out such a problem."

We strongly oppose any Federal legislation which may result in the iron mining industry of Minnesota being placed at a competitive disadvantage internationally.

We also strongly oppose those portions of S. 3132 which inject the Secretary into the details of State planning, funding, and personnel practices, particularly when the State has recognized the problem and is competently and realistically working on solutions.

The involved paperwork connected with Federal programs has become the strangulation of many worthwhile programs and imposes an immense workload on State government. For example, Minnesota recently submitted a report on a $50,000 Federal assistance program which required many man-hours of work and a stack of supporting documents 7 inches high by actual measurement. In the testimony today the reported discrepancies on disturbed acreage is illustrated by the difficulties involved in outside supervision.

It is our position, therefore, Mr. Chairman, that the Federal legislation can best assist Minnesota in surface mining reclamation by research and technical assistance.

The key problem is that of sorting out values, sorting out the positive values from the negative. This we are already doing.

An illustration of this is the Hobrusk mine which is of such grandeur and such scope that it has to be regarded as a positive value. That same large open pit mine in the world if surrounded by stockpiles would have to be considered negative.

If at some time in the future Federal assistance is made available to States for general reclamation purposes, it should by all means be on a block grant basis rather than the attrition and the administrative strangulation which accompanies detailed State plans submitted to Federal officials outside the State.

We have underway in Minnesota, as I have mentioned, positive action and cooperation to meet our own needs under the very first statute in our law books, statute No. 1 which says that the State shall exercise jurisdiction over all the lands within its boundaries.

In Minnesota I feel sure that the next 2 years will show that we can successfully solve our own problems. If we cannot, this will also become evident.

It is clear from these hearings that the problems of the various States differ and, therefore, require separate answers. It also seems obvious that the problems of the various types of mining differ and, therefore, require different approaches, particularly with respect to coal. If there is to be Federal legislation we suggest that the committee seriously consider the problems of coal mining separately lest Minnesota be saddled with undesirable legislation created to solve problems that exist in other States but do not exist in ours.

We do not wish to appear unfriendly, Mr. Chairman, but we can see no reason why our State efforts on a State matter should be interrupted or interfered with by officials outside the State.

Thank you, Mr. Chairman.

Senator BURDICK (presiding). Thank you, Mr. Leirfallom. I just want to ask one question.

The Minnesota statutes provide that the leases shall contain certain conditions. One which you have underlined in your statement is that the lessee shall restore the premises as nearly as the commission deems practical to the natural conditions of the surrounding area.

In practice, how has that proviso worked out?

Mr. LEIRFALLOM. These, Mr. Chairman, are new leases now being negotiated for the copper and nickel industry. The industry has cooperated with us in developing reasonable standards and we anticipate no problems whatsoever because these arrangements are worked out in cooperation with the industry. But they are more a part of the future than of the past.

Senator BURDICK. This is a fairly recent law?

Mr. LEIRFALLOM. That is right. We have a new industry coming up in Minnesota, namely, copper-nickel.

Senator BURDICK. Thank you for your contribution. The complete text of the Governor's statement will be printed at this point.

(The statement referred to follows:)

STATEMENT BY HON. HAROLD LEVANDER, GOVERNOR, STATE OF MINNESOTA

Minnesota, a land of great natural beauty and the Nation's largest producer of iron ore, is vitally interested in any legislation that could affect the iron mining industry and thus the economy of the state. We therefore welcome the oppor-

tunity to present our views on the proposed Surface Mining Reclamation Act of 1968.

HISTORY AND DEVELOPMENT

The history of iron mining in Minnesota dates back to July 31, 1884, with the first shipment of iron ore from the Soudan Mine on the Vermilion Iron Range. In the next decade the Mesabi Range itself came into production with the opening of the Mountain Iron Mine in 1892. In quick succession iron mines were discovered and opened in the Biwabik and Hibbing areas and near Virginia and Eveleth. Most of the early mines were operated as underground mines but the large deposits were soon converted into open pit operations typical of the Mesabi Iron Range.

As mining operations moved westward along the Mesabi, a third Minnesota iron range was being explored and developed. The Cuyuna Range, east and north of Brainerd, shipped its first iron ore in 1911 (see Appendix I, "Minnesota's Iron Ranges").

Underground mining was important in the early days but the last of the underground mines closed in 1967. Large-scale open pit mining has facilitated the rapid development of new mines and increased production. The Hull-Rust Mine at Hibbing is noted as the largest open pit iron ore mine in the world.

Advances in equipment and technology have permitted the change from direct shipping natural ore to the concentrating type natural ores and finally the complex separation of magnetic taconite ores. The present pellet plant capacity from Minnesota's seven taconite plants totals 32.4 million tons per year (see Appendix II). This represents over 65% of the nation's present pellet capacity. These seven taconite plants represent a total capital investment in excess of one billion dollars. Since the turn of the century, the nation's iron and steel needs have been met largely with iron ore shipped from the iron ore mines located on Minnesota's three iron ore ranges. Minnesota has produced over 60% of the nation's domestic iron ore during the past 84 years.

The discovery and development of Minnesota's three iron ranges came at an important time for our nation and for the world, for the 20th century, with its world wars and great economic growth, has demanded tremendous quantities of iron ore. Two world wars plus the Korean conflict have contributed greatly to the depletion of the national reserve. There are, however, over 45 billion tons of magnetic taconite reserve and considerably more tonnage of non-magnetic taconite still available in Minnesota. Iron ore is the basic raw material in the making of steel, and Minnesota is fortunate for its endowment of this important natural resource.

The economic future of Minnesota, the sustenance of the mining industry, and the strength of our nation rest with the continued wise conservation and development of this valuable resource.

STATE ENCOURAGEMENT OF MINING

Minnesota has shown a continuing concern to maintain a competitive position with other countries and the various states in the iron mining industry. We have demonstrated our desire to maintain this competitive position through numerous legislative actions.

The encouragement given the taconite industry illustrates this point, and is described as follows: Beginning in the early 1920's, and continuing for twenty years, the state legislature appropriated approximately $20,000 per year to support the experiments of Dr. E. W. Davis, director of the University of Minnesota's Mines Experiment Station, and others relating to the concentration of iron minerals found in taconite ore. During this same period approximately $30,000 to $40,000 per year was made available for this same purpose from the regular budget of the University of Minnesota, a tax-supported institution. In 1941, near the end of the period in which Dr. Davis and others perfected the laboratory process for concentrating the iron minerals found in magnetic taconite, the legislature enacted laws which authorized leasing of state-owned taconite ore-bearing lands in larger units (240 acres) than that for iron ore (80 acres), and lowered the minimum rentals and royalties to be paid under a taconite lease. Most of the state-owned lands containing taconite ore were leased within a relatively short period after enactment of these laws. In 1943, the legislature authorized the conversion of iron ore permits to taconite leases, which, as mentioned above, provide lower rentals and royalties. In 1945, taconite companies were given the power of condemnation by the legislature, and also were authorized to use state

lands, under permit, for operations relating to taconite mining. The legislature, in 1947, authorized the Commissioner of Conservation to issue water appropriation permits to the taconite industry which would be irrevocable except for breach of conditions of the permit. The 1949 legislature authorized the Commissioner of Conservation to grant permits to the taconite industry to drain, divert and otherwise use waters under his jurisdiction. In 1957, the legislature authorized extensions of twenty-five years for leases which have been or may be designated as taconite leases. Finally, in 1964, the citizens of the State of Minnesota approved the "Taconite Amendment" to the State constitution which provided certain tax protections to the taconite industry.

With growing competition for capital investment in iron mining from Canada, South America, Africa, and Australia, we must be increasingly concerned with any congressional action which might jeopardize or affect the competitive position of Minnesota. While broad nationwide surface mining regulations may reduce the likelihood of one state being placed at an economic disadvantage among the other states due to its reclamation efforts, the hazard of Minnesota's or the nation's iron mining industry being placed at a competitive disadvantage internationally must be considere and avoided. Iron ore from foreign countries provides Minnesota's primary competition.

ECONOMIC EFFECTS OF MINING

As the second largest industry in Minnesota, iron mining has long played an important role in the entire economy of the state. The enormous capital investment required, the large labor force employed, the direct state, county and local taxes it pays (over $1.5 billion since World War I) are some of the measurable effects. The related industry and services it also supports magnifies its economic importance to the state to an even greater extent.

The State of Minnesota is perhaps unique in the amount of mineral lands which it still owns and administers. Of the 8.5 million acres of land originally ceded to the state, 5½ million were dedicated as permanent trust fund lands. Due to the foresight of our early state officers and legislators, the legislature, in 1889, passed the first mineral lease law, an act which also reserved to the state all rights to minerals in trust fund lands located in three counties where minerals were then known to exist. In 1901 the legislature extended this to all state trust funds lands. Although much trust fund surface land has been sold, the state, because of this early action, has retained the mineral rights to over 5 million acres of this land. Rental and royalty revenue from mining on these lands has been the primary source of moneys deposited in the permanent trust funds which now total over $300,000,000. The interest derived from this total is used for the support of public schools, state universities, and other public institutions. As agent for the county and local taxing districts, the state also administers the many millions of acres of mineral rights that have been forfeited for taxes.

In the known open pit area of the Mesabi Iron Formation, which extends for a distance of over 110 miles, the total State ownership amounts to over 18%. From the time of the first shipment of state-owned ore in 1893, until 1968 over ⅓ billion tons of direct shipping or natural ore concentrates have been produced from state-owned properties. In addition, over 100 million tons of state-owned crude taconite ore have also been mined.

Of the 45 billion tons of commercial crude taconite iron ore located in the potential open pit portion of the iron formation, Minnesota, through its ownership of trust fund lands and lands that have been forfeited for taxes, owns approximately 9 billion tons which some day can be converted into about 3 billion tons of high grade taconite concentrates or pellets. This reserve tonnage of State-owned material is particularly impressive when compared with the 2.8 billion tons of natural iron ore and concentrates that have been produced from both State and privately-owned mineral lands during the 84-year history of iron mining in Minnesota, and the 4½ billion tons of iron ore that have been produced to date in the United States.

LONG-RANGE MINING

Geological conditions favorable to the formation of sedimentary iron deposits have occurred many times in the remote past. These conditions were often very similar in widely separated areas. So alike are the Precambrian iron formations of Minnesota, Labrador, Brazil, and India that geologists are scarcely able to differentiate them.

The iron formation of Minnesota's Mesabi Range is classified into four main horizons—the Lower Cherty, the Lower Slaty, the Upper Cherty, and the Upper Slaty—with a total average thickness of over 500 feet. Each of these horizons and its many sub-groups has its own peculiarities and degrees of natural enrichment. Thus, in the mining of an economic deposit, lean and waste materials by present-day standards are often encountered, and grade-quality structure dictates the segregation of these leaner materials into various stockpiles adjacent to the properties for future use. Many stockpiles and tailings ponds have already been re-worked to produce substantial tonnages of merchantable ore (see Appendix III, "Stages of Mining on the Mesabi Range").

A recent deep drilling exploration by the University of Minnesota has confirmed the continuance of the iron formation down dip. Many geologists believe that Lake Superior is underlain by this formation which resurfaces as the iron deposits of Wisconsin and Michigan. Mining engineers are already envisioning the day when taconite will be extracted from vast underground workings. Metallurgists are continuing to make breakthroughs on economic procedures to concentrate the various lean ores and non-magnetic taconites.

Iron ore mining is a matter of economics. There is no foreseeable end to mining on the Mesabi Range. Most of the presently inactive open pits are not depleted. Some will be re-worked in conjunction with magnetic taconite operations, while others will be mined for non-magnetic taconite in the future. The lean ore stockpiles and tailings ponds also represent material that has a potential use as well as a present value. Thus, the active-inactive mining cycle could be repeated many times before any areas are exhausted.

It has been known since 1948 that there was a possibility of commercial copper, nickel, and associated minerals being discovered in northeastern Minnesota. Interest in the Minnesota deposits was revived in 1965. As the result of a public sale, 266 copper-nickel leases have been issued by the State of Minnesota to date covering approximately 87,000 acres of State-owned mineral land. Much exploration has been conducted to date, and additional exploration work is programmed for the immediate future.

The interest that is presently being shown by the major copper and nickel producing companies in the potential of copper, nickel, and associated minerals in northeastern Minnesota holds promise of the development of a new mineral industry in that area that may approach the scale of Minnesota's taconite operations.

TOURISM AND MINING

In addition to iron mining as an industry, the iron range has become a major tourist attraction in northern Minnesota. The unique character of the range with its large open pits, enormous taconite plants, mountainous stockpiles, and colorful history, has drawn many tourists to the area.

The communities of the range and the mining companies have done much to encourage the tourists to view the operations and to gain a better understanding of the mining industry. The relationship of mining and tourism in this area is indicated by the brochures enclosed in the back of this report and is typical of the types of promotion used by the communities and the mining industry.

The mining companies have served the tourists by establishing mine viewpoints, conducting plant tours, and establishing recreation areas on water impoundments created to supply water for the taconite plants. One of the companies which has regularly maintained from three to seven mine viewpoints has recorded nearly 2.7 million tourists at their facilities during the past 16 years. This includes over 85,000 tourists who were given guided tours through their taconite plant. The mining companies have constructed campgrounds, picnic grounds and boat launching facilities at their water reservoirs which are open to the public.

The communities of the Range have shown a keen interest in encouraging tourists to visit this unique area by establishing such facilities as the Chisholm Mining Museum, the Two Harbors Park featuring objects relating to transportation in the mining industry, mine viewpoints, and many other facilities. The Museum of Mining at Chisholm attracted over 24,000 paid tourists from 37 of the 50 states, plus 21 foreign countries during 1967.

In 1963 when United States Steel Corporation closed Minnesota's oldest underground iron mine, the Soudan Mine, they granted the land and all facilities to the State of Minnesota to be operated as a state park. The Tower-Soudan State Park was formally dedicated and opened to the public July 1, 1965. Surface and underground tours are conducted to provide the visitor with an accurate interpretation of an underground mine and mining operations. Visitors on the underground tour are lowered 2400 feet below the surface in the same mine cage

that the miners used, are given a 3000-foot electric train ride through a mine tunnel and are shown the underground mining area and equipment. During 1967 almost 38,500 people visited the park, with over 16,000 taking the underground tour.

As a result of the unique character of the Iron Range, the tourist industry has shown a continuous growth in the area. Further expansion of the tourist industry in the mining area is contemplated. For example, the state is presently investigating the feasibility of establishing a state park in one of the huge open pits.

MINING AND OUR ENVIRONMENT—PRESENT ACTION

Minnesota is aware that much must be done in the field of planned mine waste disposal, considering that the mining of the present commercial taconite reserve alone will result in the creation of many billions of tons of inert tailings. Additional research is needed to find uses for this now seemingly useless byproduct, and means of storing this material in a manner compatible with the natural environment.

The mining industry has shown an awareness of the problem by conducting experimental planting on surface dumps, tailings basins and stockpiles. Tailings basins have generally been placed in areas which would be least detrimental to our natural resources and screened from public view except by air. Research is presently being conducted to rejuvenate sterile tailings basins to allow vegetation growth by fertilization and soil conditioning.

Water pollution due to mining, a major problem to much of the mining industry and the country, is practically non-existent in Minnesota.

The Strip and Surface Mine Study Policy Committee of the Department of the Interior recognized this fact in their report "Surface Mining and Our Environment" by stating: "The minerals in the formations are chemically inert and the terrain is flat; thus the mining operations cause little or no water pollution". Through the cooperative efforts of state agencies and the mining industry, plant waters are recirculated through closed-circuit systems and large settling basins have been established to handle any discolored mine waters. Much work is being done to prevent pollution of our lakes and streams from surface water run-off by the construction of dikes, ditches settling basins, and plant and stockpile layout.

The Department of Conservation is presently conducting research directed toward improving the quality of taconite plant water. An experimental method of removing colloidal particles from plant water is being studied to allow greater re-use of the water in taconite processing. If successful, this will further reduce the water pollution potential and will also decrease the amount of fresh make-up water required for taconite processing.

There is a vast difference between iron mining in Minnesota and coal mining in other areas of the country. In most coal operations, mining in a particular area is completed in a relatively short period of time, with the operator moving on to other areas with no reason to return. Due to the immense reserve and the structure of the formation, iron ore mining in Minnesota is a very stable industry, and the mining area will not be exhausted in the foreseeable future. Only in the southeastern part of the state, in the Fillmore County area, where small shallow iron ore deposits occur, does a situation similar to coal mining exist. In this area it has long been the practice to return the area to its natural condition upon completion of mining. By contouring and replacement of the top soil, farm crops are being raised on the mined-out areas shortly after mining operations are concluded.

The following steps have been taken in regard to the state's infant copper-nickel industry. The rules and regulations for the granting of State copper-nickel mining leases recognize the pollution and environmental control problems that could develop. As a result, the state leases contain provisions for protection of the environment and for reclamation as follows:

(Paragraph 6) Rights under the lease "* * * shall not include the right to reduce or smelt ore upon said mining unit without agreement between the lessee and the Commissioner, authorizing such use of the surface of the land and providing for the necessary protection of life and property."

(Par. 23) The provisions of the lease are "* * * subject to all applicable federal and state statutes, order, rules and regulations, and all operations under this lease shall be conducted in conformity therewith. No interference, diversion, use or appropriation of any waters over which the Commissioner or any other state agency has jurisdiction, shall be undertaken unless authorized in writing by the Commissioner or the said state agency."

(Par. 24) "* * * Surface lands owned by the State in said mining unit are not to be cleared or used for construction or stockpiling purposes unless and until the plan for such use has been approved by the commissioner. The surface use of said mining unit shall be conducted in such manner as to prevent or reduce scarring and erosion of the land and pollution of air and water."

(Par. 30) States that upon termination of the lease "* * * the lessee shall, at its own expense, properly and adequately fence all pits, level banks, and refill all test pits and cave-ins that may be deemed dangerous or are likely to cause damage to persons or property, and the lessee shall do all other work which the commissioner deems necessary to leave the premises in a safe and orderly condition to protect against injury or damage to persons or property, and shall restore the premises as nearly as the commissioner deems practicable to the natural conditions of the surrounding area."

A final example illustrates that Minnesota is aware of, and has shown its concern for the effects of mining on our environment. The Department of Conservation has selected specialists in the fields of minerals, waters, forestry, game and fish, and parks to collectively study the problem for the purpose of making recommendations for the prevention of blight and restoration of mined lands. Meetings have also been held with mine officials and specialists to study and define problem areas.

The study committee is especially concerned with long-range problems relating to mine waste disposal, the stockpiling of lean ores and taconite, and future uses of exhausted pits. These preliminary efforts have been met with cooperation and success and other state agencies have indicated their willingness to assist in studies and research.

PROPOSED FEDERAL RECLAMATION CONTROL—MINNESOTA'S VIEWS

Minnesota's main iron ore reserve, the Mesabi Range, is unique among the Nation's iron ore sources due to its structural uniformity and size. It represents the Nation's largest assured source of this vital raw material. The physical characteristics of the iron formation are such that in the practice of good mineral conservation, open pit mines must remain "open" for greatly extended periods, and lean ore materials stockpiled for future use.

We feel strongly that Minnesota is best qualified among all of the 50 States to cope with the unique problems associated with surface mining of its iron ore, problems which are identified and which are being worked on, and which no other State confronts to the same degree as Minnesota. The State, therefore, agrees with those purposes of S. 3132 found in Sec. 3, clauses (d), (e), and part of (f), which read as follows:

"(d) That, because of the diversity of terrain, climate, biologic, chemical, and other physical conditions in mining areas, the establishment on a nationwide basis of uniform regulations for surface mining operations and for the reclamation of surface-mined areas is not feasible:

"(e) That the initial responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining operations and for the reclamation of surface-mined areas should rest with the States; and

"(f) . . . to assist the States in carrying out such a program."

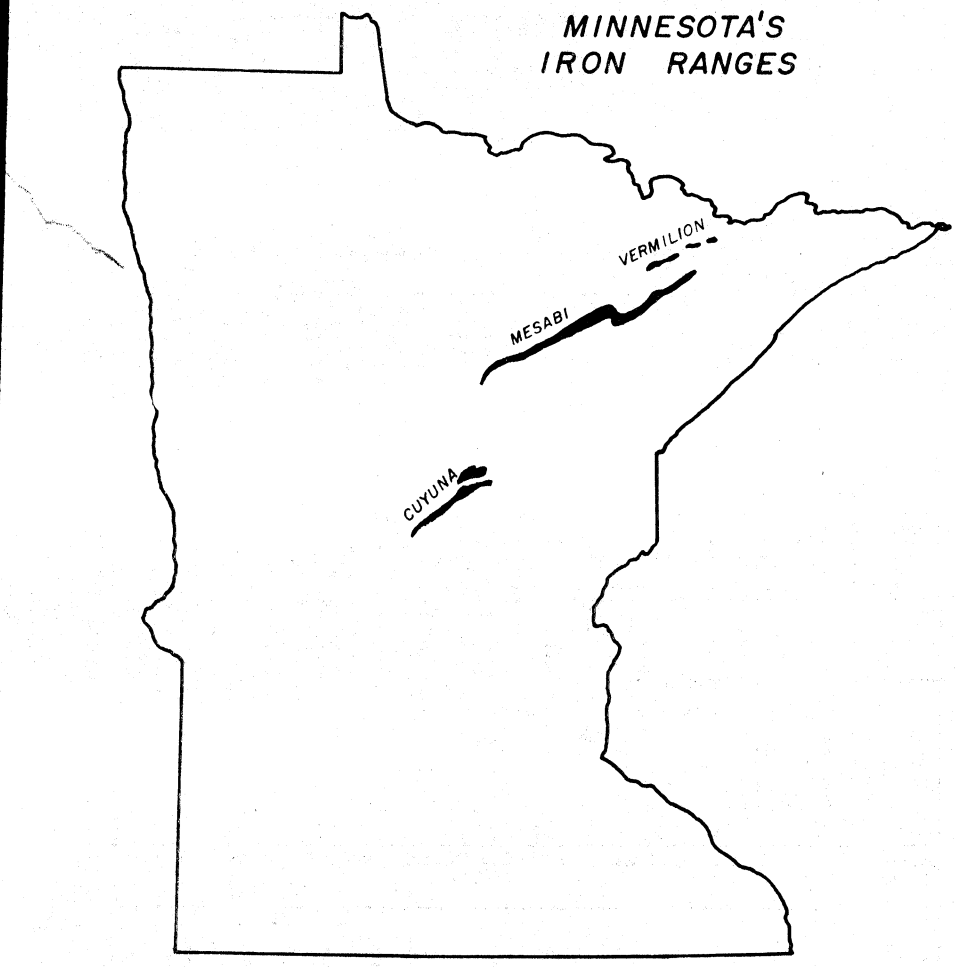
We strongly oppose any Federal legislation which may result in the iron mining industry of Minnesota being placed at a competitive disadvantage internationally.

We also strongly oppose those portions of S. 3132 which inject the Secretary into the details of State planning, funding, and personnel practices, particularly when the State has recognized the problem and is competently and realistically working on solutions. The involved paperwork connected with Federal programs has become the strangulation of many worthwhile programs and imposes an immense work load on State government. For example, Minnesota recently submitted a report on a $50,000 Federal assistance program which required many man hours of work and a stack of supporting documents seven inches high.

It is our position that Federal legislation can best assist Minnesota in surface mining reclamation by granting financial assistance and making available technical help as needed. On many occasions we have expressed our strong interest in creative and effective Federal and State relationships built around a "block grant" principle, rather than Federal involvement in the details of State planning and administration. The matters we are concerned with here today could well be served by the application of the "block grant" concept.

In conclusion, the State appreciates the opportunity given to present its concerns in regard to the legislation under consideration. In your forthcoming deliberations we urge you to refer to the material we are supplying you today and invite you to make further inquiry of the State, should the need arise.

APPENDIX I



APPENDIX II

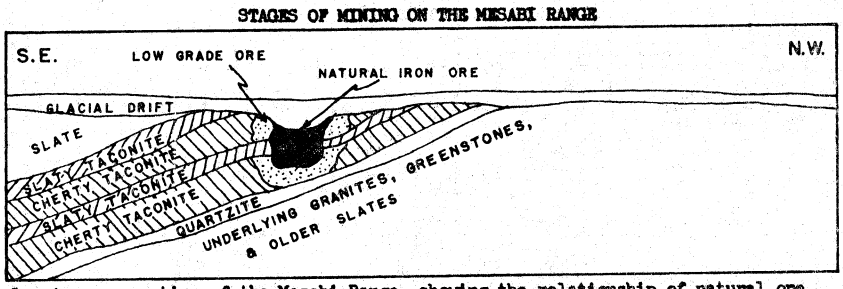
MINNESOTA TACONITE PLANTS IN OPERATION, APRIL 1968

[In million tons]

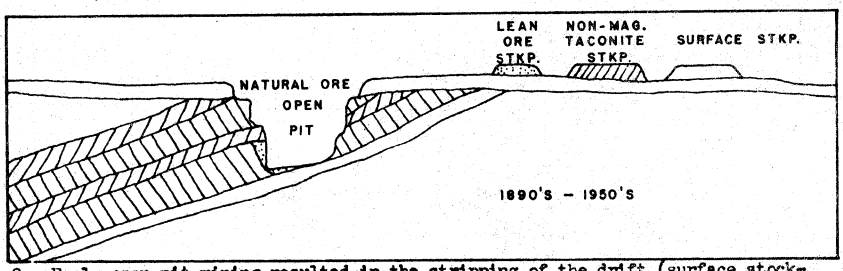
Mining company	Annual pellet production	Plant location
Reserve Mining Co	10.7	Silver Bay.
Erie Mining Co	10.3	Hoyt Lakes.
United States Steel Corp	4.5	Mt. Iron.
National Steel Pellet Plant (The Hanna Mining Co. and National Steel Corp.)	2.4	Keewatin.
Butler Pellet Plant (The Hanna Mining Co., Inland, and Wheeling Steel Corp.)	2.0	Nashwauk.
Eveleth Taconite Co	1.6	Forbes.
United States Steel Corp.[1]	.9	Mt. Iron.
Total	32.4	

[1] Pilot plant.

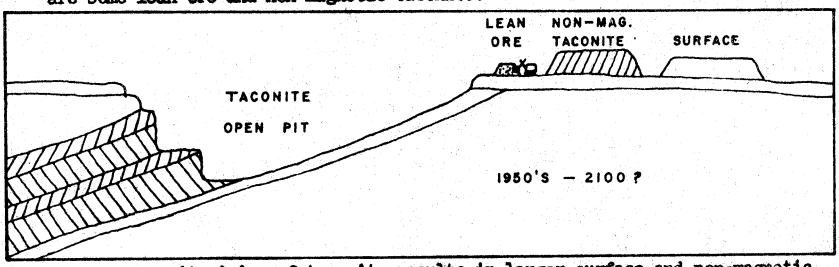
STAGES OF MINING ON THE MESABI RANGE



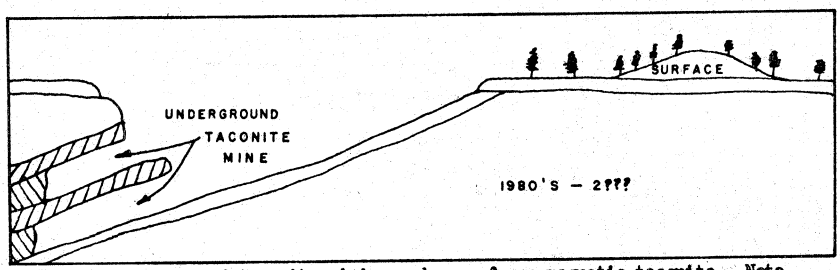
1. A cross section of the Mesabi Range, showing the relationship of natural ore, low grade ore, and taconite.



2. Early open pit mining resulted in the stripping of the drift (surface stockpile) and removal of the natural ore and most of the lean ore. Also stocked are some lean ore and non-magnetic taconite.



3. Later, open pit mining of taconite results in larger surface and non-magnetic taconite stockpiles.



4. Future underground taconite mining and use of non-magnetic taconite. Note that the non-magnetic taconite stockpile has been removed and processed.

Senator BURDICK. Mr. Richard T. Eckles coordinator, Department of Natural Resources, State of Colorado.

I recognize Senator Allott of Colorado.

Senaor ALLOTT. Thank you, Mr. Chairman.

I am very happy to be here today and to have the opportunity to introduce Mr. Richard T. Eckles to this committee.

This is one of those happy incidents. I have known his father, and mother, too, for more years than I care to mention, and I suspect that I have known him practically all of his adult life. He is the coordinator of the Department of Natural Resources of the State of Colorado which position he has held now approximately 6 years.

This department is charged with the responsibility of all of the resources of Colorado, not alone mining, and stabilization and pollution, but also responsibility for the reclamation of water and the conservation of water within the State of Colorado. He has done a very brilliant job and I am very happy to be able to make these remarks before he testifies.

I thank you.

STATEMENT OF RICHARD T. ECKLES, COORDINATOR, DEPARTMENT OF NATURAL RESOURCES, STATE OF COLORADO

Mr. ECKLES. Thank you, Senator Allott, for those very kind remarks.

Mr. Chairman, members of the committee: I am pleased to have the opportunity to appear before you today not only to comment briefly on S. 3132 but also reflect on some of the problems the States are experiencing in the field of natural resources. The continual necessity to react instead of acting on these great problems is becoming an unacceptable position.

The Public Land Law Review Commission, which was established by the Congress of the United States, is directed to complete its studies and come before you with recommendations by 1971. The Western States futures depend on these recommendations. Since the Public Land Law Review Commission was established, the States have experienced a flood of legislative proposals and executive orders from the Federal agencies which cover the same subjects this Commission is studying. It is obvious to me the implications of these actions. What are we to do; wait in good faith until 1971, or continually react on these current proposals?

I will give you a specific example of the cooperation the States of Utah, Wyoming, and Colorado are having with the Secretary of the Department of the Interior regarding the oil shale lands. The Governors of these States, along with myself, met with Mr. Udall in Denver on May 4, 1967, to discuss Interior's oil shale leasing program. During this meeting, Mr. Udall suggested the establishment of liaison between the appropriate State and Federal agencies to combat problems in the areas of water pollution, spent shale dumps, air pollution, land restoration and reforestation, wildlife protection, and so forth.

The Governors responded to Mr. Udall's suggestion in a positive manner.

Since that meeting, we have not had any further word about this most important subject.

With reference to S. 3132: I am not impressed with the proposed authority in this bill. Section (3) (b) is an infringement on States rights and also creates a conflict with the Federal Water Pollution Control Act. The continual inference that the States are not capable or interested in controlling the resources within their boundaries is no longer acceptable to me.

I have attached to this statement copies of a land restoration agreement which was consummated April 16, 1965, between Surface Coal Mine Operators and the Colorado Department of Natural Resources. This agreement covers over 95 percent of the coal lands that were mined as far back as 1940.

It is difficult for me to envision legislation that is retroactive or that will blanket all operations. Some lands will cost only a few dollars per acre to restore while others might cost $1,200.

With the assistance of my State agencies, which are soil conservation, water pollution, bureau of mines, game, fish and parks, coal mine inspection, forest service, and the Colorado State University, we can get this job done better than some bureau in Washington, D.C. My big-game biologists inform me that this program is doubling the carrying capacity of this land compared to the surrounding terrain.

My State has another project which is being conducted at Colorado State University. It is a 4-year program jointly funded by the mining industrial board, State forester, game, fish, and parks department, and the university are to develop restoration programs for Colorado mine dumps and mill tailing ponds. The most current conservation action that comes to my mind is a mining operation that will be in production within the next 5 years. After I had many long hours of discussion with their design engineers, the company increased their construction costs $12 million to assure the protection of the esthetics and wildlife of this area.

In fact, in addition to my prepared statement, Mr. Chairman, Colorado looks on the sand and gravel operations as a fertile area for future potential. Where there is water available, we are hopeful that some of these areas can be developed into park and recreation areas. Where there is not water available, these are attractive sites for solid waste disposal.

The attachment I referred to earlier in my statement that is an agreement with the coal companies was looked upon by the State of Montana favorably and they incorporated these thoughts in a recent law passed by their legislature.

Colorado and many of the States need experience in these new programs that have been initiated in many of the States in the West. We need that experience due to the difference in the altitudes and climates that we experience within our State boundaries.

With this, Mr. Chairman, I apologize for having taken the committee's time today, but I hope my statement will point up some of the problems these proposals are creating for the affected States.

Senator BURDICK. Thank you for your contribution.

Does the State of Colorado have a conservation act?

Mr. ECKLES. We do not have a Colorado law covering specifically surface mining, but with the agreement I referred to, and which is attached to my statement, I feel invaluable experience and information will be derived from this agreement.

Senator BURDICK. These agreements are voluntary, they do not have the force of statute?

Mr. ECKLES. Not directly, but in my field there are many Colorado laws whether it be mine safety, water pollution, degradation, we have those types of laws.

Senator BURDICK. But no one comprehensive law?
Mr. ECKLES. No, sir.
Senator BURDICK. Thank you again.
Mr. ECKLES. Thank you, Mr. Chairman.
(The memorandum referred to follows:)

MEMORANDUM OF UNDERSTANDING BETWEEN COAL SURFACE MINING COMPANIES OF COLORADO AND THE COLORADO DEPARTMENT OF NATURAL RESOURCES, STATE OF COLORADO

Whereas, the Mutual Objective of the signatory parties to this Memorandum of Understanding is to accomplish in the State of Colorado, the restoration of land affected by the surface mining of coal to its most practical and productive use within the shortest possible time, and

Whereas, the principal method of accomplishing this objective is to establish vegetative cover on all such land as soon as chemical, physical and moisture conditions permit.

Now, therefore, the signatory parties hereby enter into the following Memorandum of Understanding:

Definitions; Wherever used or referred to in this Memorandum, unless a different meaning clearly appears from the context:

(a) "Overburden" means all of the earth and other materials which lie above natural deposits of coal, and also means such earth and other materials disturbed from their natural state in the process of open cut mining.

(b) "Surface mining" means the mining of coal, by removing the overburden lying above natural deposits thereof, and mining directly from the natural deposits thereby exposed.

(c) "Operator" means any person, firm or corporation engaged in and controlling an open cut mining operation.

(d) "Affected land" means the area of land from which overburden shall have been removed, or upon which overburden has been deposited, or both.

(e) "Refuse" means all waste material directly connected with the cleaning and preparation of substances mined by open cut mining.

(f) "Ridge" means a lengthened elevation of overburden created in the open cut mining process.

(g) "Peak" means a projecting point of overburden created in the open cut mining process.

(h) "Department of Natural Resources" means Coordinator of Natural Resources and/or any state department, commission, or agency so designated to represent the Coordinator.

(i) "Industry" means those operators who are signators to the Memorandum of Understanding as well as any operators who subsequently ratify it and agree to be bound by its terms.

PROVISION I

It is agreed that it shall be the responsibility of the Coal Surface mine operators, who engage in open cut mining for coal to carry out the reclamation work.

PROVISION II

As soon as possible after the completion of the mining operations in an immediate area, a Reclamation Plan shall be prepared by the operator, which among other things, will include a map which shows the affected area and other pertinent details, such as roads, and access to the area.

Suggested scales

Up to 10 acres	1''=100'
10 to 40 acres	1''=200'
40 acres and above	1''=400'

All maps shall show quarter sections, sections, township and county lines coming within the scope of the map; access to the area from the nearest public road, a meridian, a title containing operator, address, scale of map, by whom map was drawn, name of engineer, date, and township, range and county.

PROVISION III

A—Grading shall be carried on adjacent to public highways by striking off ridges to a width of at least ten (10) feet at the top and peaks to a width of at least fifteen (15) feet at the top. In all cases, an even or gently undulating skyline as seen from the roadway will be a major objective.

B—Earth dams shall be constructed in final cuts of all operations, where practical, if necessary to impound water providing the formation of such impoundments will not interfere with mining operations or damage adjoining property.

C—Acid forming materials in the exposed face of a mineral seam that has been mined shall be covered to a depth of not less than two (2) feet with earth or spoil material unless covered with water to a depth of not less than two (2) feet.

D—All refuse shall be disposed of in a manner that will control stream pollution, unsightliness or deleterious effects from such refuse, and water from the mining operation shall be diverted in a manner designed to control siltation, erosion or other damage to streams and natural water courses.

PROVISION IV

A—On any affected land, the surface of which is used or is going to be used by the operator for the deposit or disposal of refuse, or within depressed haulage roads or final cuts or any other area where pools or lakes may be formed, no vegetative planting of any kind shall be made.

B—On any affected land whose chemical and physical characteristics are toxic, deficient in moisture or plant nutrients or composed of sand, gravel, shale, or stone to such an extent as to seriously inhibit plant growth, planting shall be held in abeyance for a period of ten (10) years after the mining is completed. If, during this ten (10) year period, natural weathering and leaching of such affected lands fails to remove the toxic and physical characteristics inhibitory to plant growth the affected land be considered unplantable.

PROVISION V

A—On all affected land, the operator shall determine which parts of the affected land shall be reclaimed for forest, range, crop, horticultural, homesite, recreational, industrial, or other use, including food, shelter, and ground cover for wildlife.

B—If the operator's choice of reclamation is forest planting, he may select the future use objective and elect to use hardwoods or conifers, or both. He shall construct fire lanes or access roads when necessary through the area to be planted. These lanes or roads shall be available for use by the planting crews and serve as a means of access for supervision and inspection of the planting work. He shall provide free access to the general public on all lands owned or otherwise controlled by him, and across said lands to adjoining public lands, except those areas where public entry might be hazardous or a hinderance to mining operations. The operator further agrees to leave roads constructed during mining operations in passable condition for use and benefit of the general public, where practicable.

He shall permit hunting, fishing and other outdoor recreational activities as may be prescribed by the Coordinator subject to the operators decision, except in areas where such activities are found by the operator to be hazardous or objectionable.

Tree planting stock shall be ordered and planting carried out based on a spacing of 10′ x 10′, approximately 435 trees per acre. Planting methods and care of stock will be governed by good planting practices.

C—If the operator is unable to acquire sufficient planting stock of desired tree species, from the State or elsewhere, he may defer planting until planting stock is available to plant such land as originally planned or selected an alternate method of reclamation.

PROVISION VI

A—If the operator's choice of reclamation is for range, he shall strike off all the peaks and ridges to a width of at least ten feet prior to the time of seeding. The legume seed shall be properly innoculated in all cases. The area may be seeded either by hand, power or the aerial method.

The species of grasses and legumes, and the rates of seeding to be used per acre shall be determined primarily by recommendations from the Colorado State Agricultural Experiment Station and experienced reclamation personnel of the mining companies, after considering other research or successful experience with range seeding on Colorado mined land.

PROVISION VII

If the operator's choice of reclamation is for Agricultural or Horticultural crops which normally require the use of farm equipment, the operator shall grade off peaks and ridges and fill valleys of such land to a degree so that the area can be traversed with farm machinery reasonably necessary for such use. Preparation for seeding or planting, fertilization, and seeding or planting rates shall be governed by general agricultural and horticultural practices except where research or experience in such work on Colorado mined lands differ with such practices.

PROVISION VIII

If the operator's choice of reclamation is for the development of the affected area for homesites, recreational, industrial or other uses including food, shelter and ground cover for wildlife, the basic minimum requirements necessary for such reclamation shall be worked out between operators, the Coordinator, and/or other interested parties in each individual case in the preparation of the plan.

The Coordinator agrees

A—To assist the Industry in reclaiming and restoring strip mined areas by providing technical and trained personnel for planning and evaluation of reclamation operations.

B—To assist in obtaining planting stock, seeds, cuttings, etc. of suitable plant species used in restoring strip mined areas.

C—To cooperate with and assist the Industry in obtaining aid from other governmental organizations and institutions for the overall development and promotion of strip mined area reclamation efforts.

PROVISION IX

The Reclamation Plan prepared by the operator shall be based upon:

Provisions for or satisfactory explanation of, all general requirements, for the type of reclamation chosen.

The details of the Plan shall be appropriate to the type reclamation designated by the operator and based upon the advice of technically trained personnel experienced in that type reclamation on surface mined lands and by scientific knowledge from research into reclaiming and utilizing mined lands of Colorado, when available.

PROVISION X

All reclamation shall be carried to completion by the operator with all reasonable diligence and shall be completed prior to the expiration of three years after the Plan is prepared except as provided in Provision IV–B and V–C.

PROVISION XI

The Coordinator or his accredited representatives may enter upon lands on which the operator is mining for the purpose of inspection.

The Coordinator shall give written notice to operator of any suggestions or comments concerning the reclamation work.

As soon as all reclamation work prescribed in the Reclamation Plan is completed, the operator shall notify the Coordinator.

The Industry and the Coordinator mutually agree

A—To meet once each year, or more often if deemed advisable, for an on the ground inspection of all strip mined areas not previously inspected.

B—To promote and advertise sound natural resource management through all mass media reasonably available; to make periodic and special public releases, jointly or individually regarding the progress of reclamation projects, provided however that individual public releases either shall be cleared by the other party or shall not be derogatory or critical of the other party. In the event of disagreement or conflict with established policy or administrative

procedure the matter shall be directed through proper channels to the Coordinator of Natural Resources, State of Colorado and the designated officials of the signatory companies for decision or reconciliation.

C—All supplementing or more specific agreements between the parties hereto that subsequently may be considered will be prepared within the framework of this agreement.

D—It is expressly stipulated and agreed by both parties that each and every provision in this Memorandum of Understanding is subject to the Laws of the State of Colorado, and to the delegated authority assigned in each instance.

E—Nothing in this agreement shall be construed as obligating the Coordinator or his designated representatives in the expenditure of funds or for future payment of money in excess of appropriations authorized by law or obligating the companies of the Industry to expenditure of funds in excess of those monies normally and reasonably budgeted for the provisions contained in this agreement.

F—This agreement shall become effective when signed by the designated representatives of the parties hereto and shall remain in force until terminated by mutual consent, or by either party upon six months notice in writing to the other of its intention to do so. Amendments to this agreement may be proposed by either party and shall become effective upon approval by both parties.

IN WITNESS THEREOF, the parties hereto have subscribed their names and affixed their seal this 16th day of April 1965.

Attest:

ENERGY COAL CO.,
R. T. ECKLES, *Coordinator.*
HARRISON EITELJORG, *President.*

Attest:

E. T. WHITCROFT, *Secretary.*
PITTSBURGH & MIDWAY COAL MINING CO.,
J. A. MINER, *Vice President-Engineering.*

Attest:

HENRY J. HOFMENTES, *Secretary.*
PEABODY COAL CO.,
S. L. JEWELL, *Vice President.*

Attest:

C. S. MULVANEY, *Secretary.*

Executed and witnessed this 16th day of April 1965.

A. J. CHRISTIANSEN, *Witness.*

Senator BURDICK. The next witness will be George Zeigler of the National Limestone Institute.

STATEMENT OF GEORGE A. ZEIGLER, CHAIRMAN OF THE BOARD, NATIONAL LIMESTONE INSTITUTE, INC.; ACCOMPANIED BY ROBERT KOCH, PRESIDENT, M. J. GROVE LIME CO.

Mr. ZEIGLER. Mr. Chairman, my name is George Zeigler. I am manager of corporate accounts for the M. J. Grove Lime Co., a division of Flintkote Co., Frederick, Md.

It is my privilege to be the spokesman in my capacity as chairman of the board of the National Limestone Institute, Inc., of 548 limestone producers from 34 States.

I have with me Bob Koch, our president, who resides here in Washington.

We operate mines and quarries in producing the great variety of limestone products for agriculture, business, and the local, county, State and National Governments.

As you know, limestone is also widely used in connection with our Nation's conservation programs; and because of this many of our members have developed a keen interest in conservation and the

work that the Department of the Interior is doing in conserving our Nation's land and waterways.

Therefore, I find myself coming before you today, with mixed emotions, because I am not at all certain that the real intent of this legislation is as clear is it could be.

I have reviewed the very graphic book entitled "Surface Mining and Our Environment" which was published by the Department of the Interior.

And, I must agree that any organization or individual with any feeling for conservation could not help but be moved by the scenes pictured in that book.

Our Nation must not allow vast acreages to be literally turned upside down and left as waste. The extraction of a relatively small amount of minerals from beneath the surface must not be allowed to destroy the value of the land which is left.

And, of course, steps should be taken to control the pollutants from mining operations. However, these adverse developments which I have just covered are not inherent to all forms of "Surface Mining" operations.

As this type of legislation has been under consideration in recent years, we have never felt we came under it as it was usually termed "strip mining."

But, because of the use of the words "surface mining" in this bill, which has a much larger scope, we are concerned.

In the quarrying of limestone, the destruction of thousands of acres of land, and the pollution of streams and rivers and resultant destruction of fish and wildlife does not occur.

Limestone quarries are relatively small, rarely do they cover more than a few acres. More often than not, they are situated away from populated areas, water pollution is not a factor since limestone in itself is a purifier of water and would enhance the growth of vegetation along waterways and improve the mineral content of the water.

Also, quarries are most generally permanent installations, much as a factory or utility. Because quarries are operated on this permanent basis, operators tend to be "good neighbors."

Many quarries, which have been caught up in the suburban spread of their localities, have long ago taken steps to screen their property with trees and plants, and new methods of blasting have virtually eliminated shock and noise to the surrounding community. Many other "good neighbor" policies are commonplace in the industry.

As I mentioned earlier, we have the impression that this legislation is being proposed to deal with "strip mining" alone. And, from our informal discussions of this matter with Interior Department officials, it was made quite clear to us that our industry was not considered a contributor to the pollution and devastation of our land.

It seems to us that the Congress, if it deems legislation necessary, should make the legislative record quite clear so that the respective States would realize that this industry does not need to be regulated to prevent the conditions outlined in section 3(b).

We, in the institute, are continually urging all limestone producers to be as "good neighbors" as possible. However, regulations to prevent the disruption of many acres of land, interfering with industry, agriculture, recreation, forestry, or contributing to floods, pollution

of waters, and so forth, are simply not needed as this industry does not do any of these things.

If the Congress passes this bill without making this clear, we are fearful that some States may forget to differentiate between the many different kinds of surface mining. This could result in untold financial hardships.

These, obviously, would have to be passed on to customers of this industry. And, as you know, some of our principal customers are local, county, State and National Governments.

For example, the point I am trying to emphasize is that when regulations are being prepared for water pollution, we certainly should be excluded, as limestone is, as I mentioned before, actually a water purifier.

In conclusion, I would like to quote from the book, "Surface Mining and Our Environment."

Reading from the bottom of page 33, it states:

"Open-pit mining is exemplified by quarries producing limestone, sandstone, marble, * * *".

"Usually, in pen-pit mining, the amount of overburden removed is proportionately small compared with the quantity of ore recovered. Another distinctive feature of open-pit mining of iron ore and other metallics, large quantities of ore are obtained within a relatively small surface area because of the thickness of the deposits * * *."

"Some open pits may be mined for many years—50 or more in fact, a few have been in continuous operation for more than a century."

Within that paragraph, I feel, lies the significant difference between limestone-quarrying operations, or open-pit mining, and "strip mining" operations.

It is a fact that quarries are relatively stable, many with permanent facilities, extracting their product from a small area without disrupting the surrounding community or countryside and without causing pollution to surrounding streams and watersheds.

Therefore, we believe limestone quarries should be excluded from this legislation.

Thank you for the privilege of appearing before you to present these views of the limestone producers of the Nation.

Senator BURDICK. I should also like to welcome Mr. Koch as an old friend of the committee.

Do you have a statement?

Mr. KOCH. No, Senator.

Mr. ZEIGLER. He worked pretty hard on this one, Mr. Chairman.

Senator BURDICK. I have just one question.

How do you handle the overburden now?

Mr. ZEIGLER. When we select a quarry site, in selecting that site we usually try to take the lowest point and bring it up to grade with the overburden.

Now one of the major reasons for electing to put a quarry in is that it has the least amount of overburden. So we don't like overburden, it is nonproductive.

Senator BURDICK. This is generally true of quarries?

Mr. ZEIGLER. Yes, generally true of limestone and aggregate quarries.

Senator BURDICK. Thank you very much.

Mr. ZEIGLER. Thank you very kindly.

Senator BURDICK. Mrs. Alice J. Grossniklaus, secretary of the Community Council for Reclamation.

STATEMENT OF MRS. ALICE J. GROSSNIKLAUS, SECRETARY, COMMUNITY COUNCIL FOR RECLAMATION

Mrs. GROSSNIKLAUS. Mr. Chairman, my name is Alice Grossniklaus. I doubt whether you will have trouble hearing me because I practice what Senator Dirksen says, if it is worthwhile saying, "aim for the back row."

First, I am president, owner, and operater of the Alpine Cheese Factory, Wilmot, Ohio. It is also Ohio's showplace of cheesemaking. I point out that it is not a two-bit outfit in the hills. We are, however, only one of 20 cheese factories located in five counties underladen with coal.

The Ohio cheese industry has been a dependable source of income to the community for over 100 years. We have around 1,500 dairy families and the industry pays them around $7 million a year income.

Industry to industry I cannot conceive of anything that is more damaging to the cheesemaking and all other agricultural industries than the turning of productive lands into strip mine devastation.

Secondly—this is every bit as important to me as the above—I am Secretary of the Community Council for Reclamation, Wilmot, Ohio. It is a nonprofit chartered organization. Its purposes are to accomplish more effective enforcement of present laws governing air pollution, water pollution, reclamation, and restoration of land and property damaged by mining and other operations, and to see additional laws and measures to improve conditions in the foregoing areas of operation, to stimulate and encourage public participation to the end that the foregoing objective may be accomplished.

With these purposes in mind, I now wish to present my addendum to the proposed testimony that I already handed in to the committee.

This addendum is presented in the form of photographic illustrations identified as reclamation reasons Nos. 1, 2, 3, 4, 5, and 6. The purpose is to portray the facts mentioned in the proposed testimony.

Following is a copy of descriptive data on the illustration, reclamation reason No. 1. Beautiful Ohio is underladen with coal in 27 counties—and there is a farming country photographed in Holmes County. Nearly all of the land underladen with coal in the counties affected are of this caliber, productive, beautiful, filled with natural resources, near populated areas, or a combination of all. Truly God-given.

Next we have three postcards which show a virgin forest. It is called Stark Wilderness Center. It is in Wilmot, Ohio. Many trees are labeled along Sigrist Woods Trail, such as this towering 200–250 year old red maple. Sigrist Woods is a heritage from the past, protected by man but managed by nature. The 409-acre center is open daily.

That is in Stark County.

Our council was instrumental in saving this virgin woods from strip mining. It is now an outdoor educational center for schools, clubs, and tourists.

Reclamation reason No. 2: Tuscarawas County strip-mined land-tax revenue versus non-strip-mined land taxes. Figures from auditor's office, Court House, New Philadelphia, Ohio. The established values

were compounded from unlimited factual valuations in numerous townships in the Garaway School District.

Garaway School District average tax paid on strip-mined land is 49 cents per acre, per year. Most of the lowest valuation is in Wayne Township and the tax is 14½ cents per acre, per year.

The average tax paid on neighboring farm land is $2.25 per acre, per year. From records compiled, the lowest is $1.18 per acre, per year.

The following projection is based on the above averages.

Farmed land at a thousand acres at $2.25 per acre, $2,250; 1,000 acres of strip-mine land at 49 cents is $490, with an annual loss of tax revenue of $1,760.

This is a continued loss until the stripped land is adequately restored.

Now we have two photos showing polluted waters and worthless land. To 1965, strip-mined land acres in Tuscarawas County are 17,568.

The next illustration is reclamation No. 3. That is Harrison County. The study reveals progress in reverse. It shows neighboring outlook in the photograph.

The population in 1940 was 20,313. The population, 23 years later, in 1963, was 17,375, a population loss in 23 years of 2,938. Thirty-six percent are under 18 years of age. Twelve percent are over 65 years of age.

A development analysis initiated by the local cooperative extension service in 1963 reveals that 41.9 percent of Harrison County households have a total income of less than $4,000 per year.

The Harrison County attitude summary results reveal that, due to the low-income bracket, many households need education in home management, decisionmaking, use of credit, budgets, and so forth.

They also do not have the training and knowledge to face immediate problems. Many low-income people stayed to face the music because they did not have the means to leave. The only daily progress visible to them is more spoil banks and more high walls.

This low-income problem exists in every county, but in counties where other industries are predominant there are more economic benefits to shoulder the burden.

From 1950 to 1960, mining employment in Harrison County decreased 29 percent.

Auditor's office, Cadiz: Stripped land spoil tax value is $10 per acre. The average real and personal taxes are $27.80 per $1,000. The auditor said, "What hurts our tax structure is that the first thing they do is tear down the buildings."

To 1965, strip-mined land, in Harrison County, is 40,474 acres.

The photo shows the stripped acres.

Projected population for 1980: 15,851.

Total land acres: 258,000.

We have an exploding population era and this county is definitely going back.

Now we have reclamation reason No. 4.

Meigs County: There was a pilot strip mine reclamation project. These are quotations and figures: $44,770 was lost in property value reported by 17 landowners representing a total of 1,943 acres.

There are three photos showing stripping erosion and siltation.

Meigs County Fish and Game Association, Pomeroy, Ohio:

As citizens, taxpayers and sportsmen, we think that this issue is years behind correcting. We all know that it is useless to purchase licenses to hunt and fish in Meigs County under the conditions caused by strip-wining in the county.

Agricultural Stabilization and Conservation Committee, Pomeroy, Ohio:

We would like to further state the damage to cropland in the area is resulting in farmers being unable to take advantage of programs offered by the Federal Government due to heavy silting of the cropland which takes it out of production. It has resulted in a loss of income to the family-size farmer which is the backbone of Meigs County agriculture.

Meigs County Game Protector Donald Williams, Pomeroy, Ohio:

It has been my sad experience to see the streams and land deteriorate in Meigs County from strip-mining for the past five years. As Meigs County Game Protector, I work very close with the outdoors, fish and wildlife throughout Meigs County.

During my time here in Meigs County, I have seen several of our streams go from good fishing streams to completely acid conditions from strip mines and fish can no longer live in these waters.

Meigs County auditor's office, Pomeroy, Ohio:

After the reappraisal of real estate in Meigs County, Scipio township valuation has shown more than $150,000 decrease in valuation. Most of this decrease is due to strip mine operations within Scipio township.

Meigs County sheriff, Pomeroy, Ohio:

The pasture lands no longer make a beautiful scene as they had in the past but make an ugly picture that will remain or even grow worse unless something is done in the future to help the people that have had the burden placed upon them by other persons.

The dwellings that are left standing in this particular area are usually occupied by persons that cause much trouble to the people of the communities and to the local law enforcement agencies.

The Farmers Bank & Savings Co., Pomeroy, Ohio:

From a purely economic standpoint, this damage caused by stripping has run into hundreds of thousands of dollars, not only has it caused the loss of farm income but it has caused the loss of bank deposits, tax revenue; and has added untold burdens on our county and State highway departments.

Snowville Store, Wendell Hooper, owner, Albany, Ohio:

I have been in the store business for 35 years in a farming district and done a good business till strip mining came along and damaged the farms till the farmers could hardly pay their taxes. That hurt my business until I can hardly pay taxes.

Meigs County Farm Bureau, Tom Sayre, president, Pomeroy, Ohio:

We cite such evidence as loss of farm income being loss of land value, loss of tax revenue, damage to roads, destruction of wildlife habitat and damage to the rural social structure.

Commissioners of Meigs County:

The strip mine operations in this area of Meigs County have caused heavy damage to county and township roads. (Statement of damage to be prepared by the County Highway Department.) It is a noted fact that the farm land in this area is decreasing in value which causes a loss on the tax duplicate in Meigs County.

Department of Highways, Division 10, Marietta, Ohio:

State Routes most seriously affected are 143, 680, 684, and 692. Direct costs incurred to date are derived from both documented cost figures and estimated cost portion of overall maintenance expenses attributed to strip mining, total

$90,946. Indirect estimated cost of cleaning channels, culverts, bridges, raising grades and correcting slides—Total $185,000. This does not include damage to pavement surfaces resulting from hauling of the stripped coal.

Citizens and taxpayers—From individual case histories:

In addition to the statements we have already made concerning what strip mining has done to our property, we would like to quote an agent from a farm loan agency, "If we see any strip mining on your farm or can see any from any position from your farm, we will not consider making a loan."

Now reclamation reason No. 5: Pennsylvania law reclamation and costs to the mining industry. There is a photo of mining before reclamation.

Restoration is planned for at the time of mining. This spoil is on top of the highwall ridge, ready for back filling.

Two photos of restoration and growth.

1. Restored back to contour with highwall terraced.

2. Contour restoration planted in clover in May 1964. This picture was taken in September 1964.

Director William Guckert, Pennsylvania Department of Mines, Bureau of Conservation and Reclamation, proudly exclaims:

Pennsylvania law is working in restoring land for useful purposes of the future. Not waste any longer.

Are ridding our state of poverty areas created by unreclaimed stripped acres.

Land restoration costs:

From $250 per acre to $500 per acre. All land is put back to contour. No high walls are permitted. The $500 per acre restoration includes top soil.

Cost per ton of coal mined is from 7 cents to 20 cents to restore stripped land.

Now reclamation reason No. 6.

It shows a picture where they take it out, but at the same time they tell us they cannot put it back due to cost.

Our council had two bills in the State of Ohio, one in 1963 and one in 1965.

In 1965, I have the testimony of the hearing. There the strip miners said it cost $27,000 to put the last acre back. In the Georgetown area, highwalls are put in, there are 73 miles of highwalls. If it would cost them $27,000 to put the last acre back, why, no one would expect them to do it but that is not true.

Then the next photo shows as they leave it. Reclamation reasons Nos. 1, 2, 3, 4, 5, and 6 are résumés of research, facts studies, and statistics and have been presented in an effort to stress the urgency for defined, adequate strip mined land reclamation, including proper enforcement measures.

Thank you.

Senator BURDICK. Thank you for your testimony. You have made quite a contribution to the record.

There are some rather graphic photographs you have submitted to the committee. They will be in the files for the use of the committee.

Mrs. GROSSNIKLAUS. Thank you.

Senator BURDICK. Since the committee will recess at 4 o'clock, we probably have time for one more witness.

I will call Mr. Ward Padgett, Inspector for Department of Mines, Oklahoma. Mr. Padgett will be the last witness today, and then we will adjourn until 9 o'clock tomorrow morning.

STATEMENT OF WARD PADGETT, CHIEF MINE INSPECTOR, DEPARTMENT OF MINES, STATE OF OKLAHOMA; ACCOMPANIED BY THOMAS KISER, PRESIDENT, ORE PRODUCERS ASSOCIATION OF THE TRI-STATE AREA IN OKLAHOMA

Mr. PADGETT. Mr. Chairman and committee members, I have with me Mr. Thomas Kiser, president of the Ore Producers Association of the Tri-State Area in Oklahoma who may have a comment or statement to make after my presentation.

My name is Ward Padgett. I am chief inspector for the Department of Mines in Oklahoma. This morning early I received a letter from our Gvernor, which at this time I would like to read.

> Since all segments of the mining industry in Oklahoma have shown their willingness to cooperate in implementation of our reclamation law, I see no reason to add additional burdens to the State by passing Federal reclamation legislation.
>
> I feel that Oklahoma is capable and willing to exercise its responsibility in this area. Our law gives us the additional authority to adopt necessary regulations to carry out the content of the act.
>
> Any additional information that the committee desires, I will be happy to supply.
>
> Sincerely yours,
>
> DEWEY F. BARTLETT, *Governor.*

In Oklahoma the mining industry became actively interested in the problem of opencut land reclamation early in 1965. Studies were begun, and many meetings were held with representatives from all segments of the industry—coal, copper, lead, zinc, crushed stone, sand and gravel, and so forth—working closely with my office and with interim legislative committees in drafting a proposed opencut land reclamation law.

When the draft was completed, these same people continued to work together in support of the passage of this legislation by the Oklahoma Legislature. This occurred in April 1967, and the law become effective January 1, 1968.

The representatives of the various segments of the mining industry in Oklahoma have shown their willingness to cooperate to the fullest extent possible in the proper and timely implementation of our reclamation law, and I have every reason to believe the industry will continue to give this kind of cooperation.

Oklahoma's Open Cut Land Reclamation Act is a very broad statute affecting all surface-mined minerals and giving the department of mines or other administering agency considerable leeway in making rules and regulations to accomplish the purposes of the statute.

Our law will deal adequately with the problems of reclamation. With the mining industry expressing and evidencing the kind of cooperation we have had in the past and have every reason to expect in the future, if additional legislation is needed, we are convinced we can rely on the industry for support and on our legislature to enact such necessary legislation.

Recognition of the problems created by opencut mining and the need for land reclamation are of recent origin. Over the last several years, more and more States have begun to look seriously at the problem and to try various methods of solution.

We believe that recognition of this problem is such and is growing at a rate which eliminates the need or the interest of Federal agencies in the problem.

I might add there that the interest of the Federal Government, we would think, would continue in the area of research and technical information.

The 31st Legislature of the State of Oklahoma has adopted Senate Concurrent Resolution 83, "Expressing Opposition to Proposed Land Reclamation Legislation Now Pending Before the Congress of the United States."

I ask that a copy of this resolution be inserted in the record at this point.

Senator BURDICK. Without objection, it is so ordered.

(The document referred to follows:)

STATE OF OKLAHOMA, SECOND SESSION OF THE 31ST LEGISLATURE

By Massad of the Senate and Mountford of the House

SENATE CONCURRENT RESOLUTION NO. 83

As Introduced

A Concurrent Resolution Relating to Mining; Expressing Opposition to Proposed Land Reclamation Legislation Now Pending Before the Congress of the United States; Memorializing Congress to Recognize the Capacity and Intent of the Several States to Develop Adequate Solutions to Problems Associated With Open Cut Mining; and Directing Distribution

WHEREAS, proposed legislation is now being considered by the Committee on Interior and Insular Affairs of the United States Senate whereby the Federal Government and agencies thereof would be assigned primary authority and responsibility with respect to the reclamation of areas subjected to open cut or strip mining practices and operations in the several states; and

WHEREAS, during recent years more and more states have recognized the problems created by open cut mining and, individually and collectively, have begun to examine various methods of solving these problems; and

WHEREAS, the Oklahoma Legislature and the State's mining industry became actively interested in the problems of open cut land reclamation early in 1965 and, through close cooperation between the industry and the Legislature, a strong "Open Cut Land Reclamation Act" was enacted into law in April, 1967 and became effective January 1, 1968; and

WHEREAS, the Oklahoma "Open Cut Land Reclamation Act" applies to all surface-mined minerals and gives broad latitude to the administering agency with respect to the development of rules and regulations for its effective enforcement and implementation; and

Whereas, our state's mining industry has displayed its willingness to cooperate fully in accomplishing the purposes of the "Open Cut Land Reclamation Act"; and

Whereas, the several states concerned with the problems of open cut land reclamation are moving, through participation in the Inter-state Mining Compact and through state legislation, to develop adequate solutions to such problems; and

Whereas, it is a basic principle of our system of government that local problems should be met locally, and only when these problems are not being met by the responsible local authorities and, simultaneously, have ramifications of regional or national scope, should the Federal Government intervene.

Now, therefore, be it resolved by the Senate of the Second Session of the Thirty-First Oklahoma Legislature, the House of Representatives concurring therein:

SECTION 1. That in view of the efforts of Oklahoma and other states affected by problems of open cut land reclamation to effectively solve these problems through their own individual and collective action, the Congress of the United States be and hereby is respectfully memorialized to recognize the capacity and intent of the several states to expeditiously and effectively solve such problems by their own efforts.

SECTION 2. That the Congress of the United States, in view of the foregoing, be and hereby is respectfully advised of our opposition to Federal reclamation legislation now pending before the Senate Committee on Interior and Insular Affairs on the grounds that such legislation is unnecessary under present conditions.

SECTION 3. That duly authenticated copies of this Resolution be forwarded to all members of the Oklahoma delegation in Congress, to the Chairman of the Senate Committee on Interior and Insular Affairs, and to Mr. Ward Padgett, Chief Mine Inspector of the State of Oklahoma.

Mr. PADGETT. Oklahoma surface-mining operators met April 24 and registered their support for the State's Open Cut Land Reclamation Act and their opposition to Federal reclamation legislation.

Therefore, on behalf of the State of Oklahoma and of the mining industry of our State, we wish to go on record as opposing Federal reclamation legislation because we feel very strongly that the problems of surface mining and reclamation can be handled far more capably at the State level.

Thank you.

Senator BURDICK. Do you have any reclamation act governing strip mining in Oklahoma?

Mr. PADGETT. Yes, sir. It became effective the first of this year.

Senator BURDICK. Then you don't have any experience to testify to?

Mr. PADGETT. No, sir. It has just begun to take shape and time will tell.

Senator BURDICK. We are going to recess now until 9 o'clock tomorrow morning.

Are there any witnesses who would like to leave a prepared statement at this time? You have a perfect right to testify tomorrow, of course. It is unfortunate that some could not be heard today. We are very sorry about that.

(The statements referred to follow:)

STATEMENT OF FRANK C. WACHTER, VICE PRESIDENT, PENNSYLVANIA GLASS SAND CORP.

Mr. Chairman and gentlemen of the Committee: My name is Frank C. Wachter. I am Vice President of the Pennsylvania Glass Sand Corp., of Hancock, West Virginia. This statement is presented in behalf of the National Industrial Sand Association of which my corporation is a member and of which I am Chairman of its Public Relations Committee. The National Industrial Sand Association, which represents the industrial sand industry in the United States, finds the proposed "Surface Mining Reclamation Act of 1968" of direct interest and importance to our industry.

I wish to call to your attention the fact that the industrial sand industry was *not* considered by the U.S. Department of the Interior in its study, "Surface Mining and Our Environment." Apparently the reason for omitting our industry from their report and statistical data was because our annual production is considerably lower than most mining industries, namely, 26,360,000 short tons produced in 1966 (Bureau of Mines, 1966 "Minerals Yearbook") and the fact that individual industrial sand operations are conducted at specific single and small locations and in some cases, for more than one hundred years, disturbing but little of the earth's surface annually. Our industry mines and processes a mineral of limited occurrence that is a necessity for the manufacture of countless diversity of products consumed by our country in both peace and war. Its necessity is so great that it received one of the top government priorities in World War II and the Korean War.

Our industry is indeed reclamation conscious. The National Industrial Sand Association's Committee on Public Relations recently completed the publication and distribution of its first reclamation research report, entitled: "Shaping the Land—Planned Use of Industrial Sand Deposits." Copies of this publication were forwarded to the members of this Committee prior to this hearing.

Copies of the National Sand and Gravel Association's reclamation research reports have always been forwarded to members of the National Industrial Sand Association. Both Associations share the same executive staff.

I wish to direct my remarks to the Administration's bill, S. 3132, entitled: "Surface Mining Reclamation Act of 1968," which was introduced by the Chairman of this Committee. I request that the following suggested changes to the bill be considered, (attached to this statement is copy of suggested language for these amendments):

(1) The clarification of Section 2(e) so that only those lands from which strip and surface mining minerals are removed in the future will be affected by the Act at the time of enactment.

(2) Extending Section 7(a)(1)(B) to include the right to modify the submitted mining plans because of changes directed by engineering technology.

(3) Extending Section 7(a)(1)(D) to provide for modification of reclamation plans because of unanticipated geological, economic, environmental, or other factors.

(4) Adding a new subsection "G" in Section 7(a)(1) to provide that when a State Plan is approved that the State be the sole and exclusive agency in delegating the authority to regulate mine reclamation.

(5) Adding new Sections 13 and 14 to create a Federal Surface Mining Reclamation Board of Review which would hold hearings on disapproved State Plans and individual aggrievances of mining producers; and

(6) Adding a new Section 15 entitled, "Judicial Review" so that any final order issued by the Board under new Section 14 would be subject to judicial review by the United States court of appeals for the circuit in which the State or mine affected is located.

On behalf of the National Industrial Sand Association and the members of the industrial sand industry throughout the United States, I sincerely hope that this Congressional Committee will favorably react and incorporate into the final enacted bill, the suggestions outlined in my testimony. Senators, I thank you for the time allotted me.

THE NATIONAL INDUSTRIAL SAND ASSOCIATION RECOMMENDS THE FOLLOWING SUGGESTED LANGUAGE FOR THE PURPOSE OF AMENDING S. 3132

Amend Sec. 2(e) by deleting the word "concluded" on page 2, line 19, and substituting therefor the word "conducted."

Amend Sec. 4 by deleting the words "and the surface mined area thereof" on page 4, lines 16 and 17.

Amend Sec. 7(a)(1) by deleting the word "and" under subsection (F), and by adding subsection (G) on page 9, line 6 as follows: "(G) provide that the state agency is the sole and exclusive agency to which the state has delegated the authority to regulate mine reclamation; and"

Amend Sec. 7(a)(1)(A) by eliminating the semi-colon after the word "environment" on page 7, line 18, and adding the following words: "and preserve and protect the availability of mining resources for the present and future;"

Amend Sec. 7(a)(1)(B) by adding the following words after the word "plan" on page 7, line 19: ", either written or graphic,"

Amend Sec. 7(a)(1)(B) by adding the following words after the semi-colon on page 7, line 24: "provided that modifications of such mining plans may be filed with, and approved by, the state agency, from time to time, when such modifications are commensurate with the purposes of this Act;"

Amend Sec. 7(a)(1)(C) by eliminating the words "relating specifically" on page 8, lines 1 and 2, and substituting therefor "where applicable"

Amend Sec. 7(a)(1)(D) by adding the following words after the semi-colon on page 8, line 15: "provided that such reclamation plans may be modified or changed from time to time to reflect discovery of unanticipated geological, economic or other conditions;"

Amend Sec. 7(a)(1)(F) by deleting the words "criminal and" on page 8, line 22.

New Sec. 7(c) "(c) In the event that the Secretary does not approve a plan submitted by a state in accordance with this section, or in the event of the withdrawal of the Secretary's approval in accordance with subsection (b) above, such state may appeal the Secretary's decision to the Federal Surface Mining Reclamation Board of Review, in accordance with Sec. 13 and 14 of this Act."

New Sec. 8(f) "(f) A mine operator aggrieved by any decision of the Secretary made pursuant to this section, shall be entitled to review of the Federal Surface Mining Reclamation Board of Review in accordance with Sec. 13 and 14 of this Act."

SEC. 13(a) An agency is hereby created to be known as the Federal Surface Mining Reclamation Board of Review, which shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) The terms of office of members of the Board shall be five years, except that the terms of office of the members first appointed shall commence on the effective date of this section and shall expire one at the end of one year, one at the end of two years, one at the end of three years, one at the end of four years and one at the end of five years, as designated by the President at the time of appointment. A member appointed to fill a vacancy caused by the death, resignation, or removal of a member prior to the expiration of the term for which he was appointed shall be appointed only for the remainder of such unexpired term. The members of the Board may be removed by the President for inefficiency, neglect of duty, or malfeasance in office.

(c) Each member of the Board shall be compensated at the rate of $75 for each day of actual service (including each day he is traveling on official business) and shall, notwithstanding the Travel Expense Act of 1949, be fully reimbursed for traveling, subsistence, and other related expenses. The Board, at all times, shall consist of two persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of surface mine operators, two persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of conservation interests, and one person, who shall be Chairman of the Board, who shall be a graduate engineer, forester, landscape architect, or attorney, with experience in the surface mining industry, and who shall not, within one year of his appointment as a member of the Board, have had a pecuniary interest in, or have been regularly employed or engaged in, or have been an officer or employee of the Department of the Interior.

(d) The principal office of the Board shall be in the District of Columbia. Whenever the Board deems that the convenience of the public or of the parties may be promoted, or delay or expense may be minimized, it may hold hearings or conduct other proceedings at any other place. The Board shall have an official seal which shall be judicially noticed and which shall be preserved in the custody of the secretary of the board.

(e) The Board shall, without regard to the civil service laws, appoint and prescribe the duties of a secretary of the Board and such legal counsel as it deems necessary. Subject to the civil service laws, the Board shall appoint such other employees as it deems necessary in exercising its powers and duties. The compensation of all employees appointed by the Board shall be fixed in accordance with the Classification Act of 1949, as amended.

(f) Three members of the Board shall constitute a quorum, and official actions of the Board shall be taken only on the affirmative vote of at least three members; but a special panel composed of one or more members, upon order of the Board, shall conduct any hearing provided for in section 14 and submit the transcript of such hearing to the entire Board for its action thereon. Every official act of the Board shall be entered of record, and its hearings and records thereof shall be open to the public.

(g) The Board is authorized to make such rules as are necessary for the orderly transaction of its proceedings, which shall include requirement for adequate notice of hearings to all parties.

(h) Any member of the Board may sign and issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and administer oaths. Witnesses summoned before the Board shall be paid the same fees and mileage that are paid witnesses in the courts of the United States.

(i) The Board may order testimony to be taken by deposition in any proceeding pending before it, at any stage of such proceeding. Reasonable notice must first be given in writing by the party or his attorney proposing to take such deposition to the opposite party or his attorney of record, which notice shall state the name of the witness and the time and place of the taking of his deposition. Any person may be compelled to appear and depose, and to produce books, papers, or documents, in the same manner as witnesses may be compelled to appear and testify and produce like documentary evidence before the Board, as provided in

subsection (h). Witnesses whose depositions are taken under this subsection, and the persons taking such deposition shall be entitled to the same fees as are paid for like services in the courts of the United States.

(j) In the case of contumacy by, or refusal to obey a subpoena served upon, any person under this section, the Federal district court for any district in which such person is found or resides or transacts business, upon application by the United States, and after notice to such person to appear and give testimony before the Board or to appear and produce documents before the Board, or both; and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(k) The Board shall submit annually to the Congress as soon as practicable after the beginning of each regular session, a full report of its activities during the preceding calendar year. Such report shall include, either in summary or detailed form, information regarding the cases heard by it and the disposition of each.

REVIEW BY BOARD

SEC. 14. (a) A state or an operator notified of an order of the Secretary made pursuant to Sec. 7 or Sec. 8 may apply to the Federal Surface Mining Reclamation Board of Review for annulment or revision of such order.

(b) The state or operator shall be designated as the applicant in such proceeding, and the application shall recite the order complained of and other facts sufficient to advise the Board of the nature of the proceeding. The application may allege: the Secretary's failure to approve a state plan, or his withdrawal of such approval, is arbitrary, capricious, or unreasonable within the intent and spirit of Sec. 7 of this Act; that the state plan submitted to the Secretary substantially complies with the provisions of Sec. 7 and should be approved; that the state, in administering a plan previously approved by the Secretary, has complied substantially with it and has enforced it adequately, and a revision of the state's previously approved plan is not appropriate or necessary to effectuate the purposes of this Act; that denial or revocation of a permit made by the Secretary pursuant to Sec. 8 is arbitrary, capricious, or unreasonable; or that the action of the Secretary in denying or revoking such permit is not supported by a failure of the applicant to comply with the spirit and intent of this Act or the regulations issued by the Secretary pursuant to Sec. 8. The Secretary shall be the respondent in such proceeding, and the applicant shall send a copy of such application by registered mail or by certified mail to the Secretary at Washington, District of Columbia.

(c) Immediately upon the filing of such an application the Board shall fix the time for a prompt hearing thereof.

(d) Pending such hearing the applicant may file with the Board a written request that the Board grant such temporary relief from such order as the Board may deem just and proper. Such temporary relief may be granted by the Board only after a hearing by the Board at which both the applicant and the respondent were afforded an opportunity to be heard, and only if respondent was given ample notice of the filing of applicant's request and of the time and place of the hearing thereon as fixed by the Board.

(e) The Board shall not be bound by any previous findings of fact by the respondent. Evidence relating to the action complained of and relating to the questions raised by the allegations of the pleadings or other questions pertinent in the proceeding may be offered by both parties to the proceeding. If the respondent claims that the action complained of is substantially in compliance with Sec. 7 or Sec. 8 of this Act, as the case may be, the burden of proving such claim shall be upon the respondent, and the respondent shall present his evidence first to prove such claim.

(f) If the Board finds that the allegations of the applicant, as described in Sec. 14(b) are correct, the Board shall make an order, consistent with its findings, revising or annulling the act of the respondent under review, or shall order the respondent to take action in accordance with its findings. If the Board finds that the allegations of the applicant are not correct, the Board shall make and order denying such application.

(g) Each finding and order made by the Board shall be in writing. It shall show the date on which it is made, and shall bear the signatures of the members of the Board who concur therein. Upon making a finding and order the Board shall cause a true copy thereof to be sent by registered mail or by certified mail to all parties or their attorneys of record. The Board shall cause each such finding and order to be entered on its official record, together with any written opinion

prepared by any members in support of, or dissenting from, any such finding or order.

(h) In view of the urgent need for prompt decision of matters submitted to the Board under this section, all action which the Board is required to take under this section shall be taken as rapidly as practicable, consistent with adequate consideration of the issues involved.

JUDICIAL REVIEW

SEC. 15. (a) Any final order issued by the Board under Section 14: shall be subject to judicial review by the United States court of appeals for the circuit in which the state or mine affected is located, upon the filing in such court of a notice of appeals by the Secretary, or the state or operator aggrieved by such final order, within thirty days from the date of the making of such final order.

(b) The party making such appeal shall forthwith send a copy of such notice of appeal, by registered mail or by certified mail, to the other party and to the Board. Upon receipt of such copy of a notice of appeal the Board shall promptly certify and file in such court a complete transcript of the record upon which the order complained of was made. The costs of such transcript shall be paid by the party making the appeal.

(c) The court shall hear such appeal on the record made before the Board, and shall permit argument, oral or written or both, by both parties. The court shall permit such pleadings in addition to the pleadings before the Board, as it deems to be required or as provided for in the Rules of Civil Procedure governing appeals in such court.

(d) Upon such conditions as may be required and to the extent necessary to prevent irreparable injury, the United States court of appeals may, after due notice to and hearing of the parties to the appeal, issue all necessary and appropriate process to postpone the effective date of the final order of the Board or to grant such other relief as may be appropriate pending final determination of the appeal.

(e) The United States court of appeals may affirm, annul, or revise the final order of the Board, or it may remand the proceeding to the Board for such further action as it directs. The findings of the Board as to facts, if supported by substantial evidence on the record considered as a whole, shall be conclusive.

(f) The decision of a United States court of appeals on an appeal from the Board shall be final, subject only to review by the Supreme Court as provided in section 1254 of title 28 of the United States Code.

Sections 13 through 16 of the present Act (S. 3132) should be renumbered respectively: 13 becomes 16; 14 becomes 17; 15 becomes 18; 16 becomes 19.

STATEMENT OF PAUL THIELE, PRESIDENT AND CHAIRMAN OF THE BOARD, THIELE KAOLIN CO., SANDERSVILLE, GA.

Mr. Chairman and members of the committee, my name is Paul Thiele. I am President and Chairman of the Board of Thiele Kaolin Company at Sandersville, Georgia. I was a member of the Georgia Legislature Study Committee that inspected several different kinds of surface mining operations, determined that surface mining land rehabilitation was desirable, and proposed legislation. The proposed bill, with one amendment, was passed unanimously by our State Legislature.

I am a nominee for the Board that will have responsibility for adopting rules and regulations and administering the Surface Mining Land Reclamation law under the Georgia Department of Mines, Mining and Geology.

I am appearing before you today as a representative of the 50 mining companies who are members of the Mining and Quarrying Committee of the Associated Industries of Georgia. We take the position that rehabilitation of surface mined land is rightfully the responsibility of the individual states. We feel that federal legislation is unnecessary and a duplication of effort because the States and the mining operators are increasingly aware of the need to prevent pollution and to reclaim mined-out land. The mining industry has made tremendous progress in this matter during the past decade.

Senate Bill 3132 is dangerous to the welfare and security of this nation. It proposes to give near dictatorial power to one man; namely the Secretary of

Interior. Specifically, it proposes to give him the following authority over the mining industry of this nation, and with no right of appeal:

1. The power to issue mining regulations with the forced cooperation of the States;
2. The power to approve or disapprove, or approve and later disapprove, State plans;
3. The authority to judge whether administration of State programs is is adequate;
4. The power to assess fines and penalties;
5. The authority to evaluate the current and future needs and to evaluate the effectiveness of mining regulatory measures;
6. The right to specify a single State agency with which he may, or may not, cooperate; and supervisors in mining and reclamations practices and techniques; and
7. The right to establish training programs for operators;
8. The right of entry to any surface mine or upon any surface mined area.

Senate Bill 3132, as written, gives the Secretary of Interior sole authority for the future regulation of surface mining operations. This could be interpreted to mean the Secretary has authority to say who could operate a mine, where he could mine, what ore he could or could not mine, how much ore he could mine, et cetera.

The members of the Mining and Quarrying Committee of the Associated Industries of Georgia also feel that there are sufficient means of enforcement of any rehabilitation plan through fines and power of injunction to shut down an operation or prohibit the sale of the ores or minerals without the additional penalty of a performance bond.

It is our feeling that States which are operating under land rehabilitation laws should be exempt from S. 3132, unless the Secretary of Interior can show a Board of Review that the State plan is inadequate or that it is not being enforced.

It is our opinion that any rules and regulations proposed by the Secretary of Interior should first be approved by a Board of Review before they may be put into effect.

Further it is our opinion that any penalty, such as refusal of a permit or a fine, should be subject to review by the Board and also the federal courts.

Further it is our opinion that the Board of Review should include state representatives, mine operators of surface mines, and persons qualified by experience or affiliations to present the viewpoint of conservation and other interested groups.

STATEMENT OF GENE LONG, GENERAL MANAGER, RECLAMATION AND LAND USE, TRUAX-TRAER COAL CO.

My name is Gene Long, and I am the General Manager of Reclamation and Land Use for the Truax-Traer Coal Company, an operating Division of Consolidation Coal Company, with mines operating in Illinois and North Dakota. Our general office address is 111 North Wabash Avenue, Chicago, Illinois. In North Dakota the company is presently operating mines at Stanton, Velva and Columbus, and our Division Office is located at Stanton, North Dakota.

In 1966 an organization was formed in the State entitled, "The North Dakota Mined Land Conservation Association," and I am here representing this association. This association represents 95 percent of the lignite coal mined in the State of North Dakota, and the members of this association produce approximately 3,100,000 tons of lignite coal annually, all by the surface mining method; employing approximately 300 persons, and approximately 210 acres of land are effected each year in the total operations.

The overburden or material being removed to expose the seam of lignite coal consist mostly of unconsolidated material with a top soil of 8 inches or less. The average rain fall is only 15 inches per year, which sometimes occurs in a very short period. The basic cash agriculture crop of the area is wheat grown on that portions of land which is tillable and a minimum amount of row crops are produced which is used basically for animal feed.

The topography is of a rolling contour and the natural vegetation on that portion which is not tillable consists mostly of prairie grass or western wheat grasses with a minimum amount of natural or controlled forestation. This area is used primarily for grazing.

The reclamation of mined land in North Dakota has been carried on for many years in a voluntary manner on an experimental basis by most of the individual companies. At the present time one company has employed a full time geologist and another company has a full time reclamation and conservation employee, both of whom are assisting and counseling the operational personnel of their respective companies and are willingly exchanging ideas at all times for the benefit of the lignite coal industry.

At the present time the Game and Fish Department of the State of North Dakota, in cooperation with the various lignite coal companies are operating from eight to ten public fishing areas throughout the State.

Considerable work in grading and seeding has been accomplished and in excess of a quarter of a million trees have been planted as part of the work carried on in the past in reclamation and conservation.

The lignite coal is of such a nature that sulfur and ash content are very minimal and does not require necessary washing and drying equipment, thereby eliminating the creating of refuse piles or slurry pits and thereby minimizing all types of pollutions from such operations.

Most of the lignite coal mined in North Dakota is above the water drainage and in those areas where water can be impounded and because of the lack of pyrites in the seams the water is such quality that it will support aquatic life.

The majority of the tonnage mined in North Dakota is mined in the remote and rural areas and is also consumed basically in sparsely populated areas. The quality of the lignite coal is of such a low B.T.U. (British Thermal Unit) analysis and of such high moisture content and therefore must be mined as economically as possible and is limited to consumption in the general mining area because of the B.T.U. delivered cost.

The Interstate Commerce Commission also recognizes the low quality of the North Dakota lignite coal when in granting the railroad freight increase on transportation of all lignite coal, limits the increase to 50% as opposed to the normal increase granting to other higher quality coals.

The United Mine Workers of America also recognizes the low quality of lignite coal by assessing only one-half of the tonnage welfare fund as against the full asessment charged against other higher quality coals.

The lignite coal industry of North Dakota has been asked to consider some type of control legislation governing disturbed land as the result of surface mining and therefore the North Dakota Mined Land Conservation Association introduced and supported "Resolution K" in the 1967 session of the legislature thereby creating and formulating a commission to study reclamation and conservation for the State of North Dakota as related to surface mining in the State.

Many field trips were made through out the State by the Commission to view first hand reclamation work that has been carried on in a voluntary manner and many meetings have been held with various governing bodies to consider the thinking of the industry in order that they might be incorporated into workable legislation for the mutual benefit of all interested parties concerned. At the present time the recommendations of the members of the commission formed by Resolution K have been assigned to the Natural Resources Committee of the Legislative Research Commission for evaluation.

It is the opinion of the lignite coal industry that it is unreasonable and not practical from the standpoint of economics and manpower to have any duplications or multiple authority of more than one governing body to implement and enforce this type of regulations.

It is most important that serious consideration be given to any regulations enacted governing the reclamation of effected land as a result of the mining of lignite coal in the State of North Dakota which could seriously effect the industry by increasing our labor and supply cost and putting us in a more unfavorable competitive situation as opposed to high quality imported coals with higher mine realizations as well as the competition from other types of competitive fuels, including nuclear and hydro generation powers.

It is the mutual agreement of the lignite coal industry that if compulsory legislation is forthcoming that a State Governing body is much more informed of the situation and much more effective in administering the rules and regulations and should be the only legislative body empowered to see that these regulations are adhered to.

Therefore the North Dakota Mined Land Conservation Association goes on record as opposing Senate Bill No. 3132.

STATEMENT OF KENNETH B. POMEROY, FOR THE AMERICAN FORESTRY ASSOCIATION

Mr. Chairman and members of the committee, I am Kenneth B. Pomeroy, Chief Forester of The American Forestry Association.

The members of the The American Forestry Association are pleased to see the interest being taken by the Congress in the regulation of surface mining. The extraction of minerals by this method is an essential activity that contributes greatly to the economy of the Nation. At the same time, it is an activity that can be, and often is, highly destructive of other natural resources such as soil, water, wildlife, timber, and recreation.

Our Association recognizes the legal right of the owner of a mineral resource to strip away the surface of the land in order to make use of his property. But we feel the owner also has a moral obligation to do his work in a way that will leave the land in productive and useable condition for future generations. The owner should not be permitted to destroy associated surface resources for all time.

Reclamation is, in our view, an integral part of the strip mining operation. We do not ask, however, that a mined area be restored in all instances to its former condition. We do ask that it be placed in a *productive* condition. Such reclamation might be in the form of a lake for recreation or a plantation or some other activity that makes productive use of mined areas.

Some States already have taken constructive steps toward control of strip mining. This program should be extended to all States in which strip mining is practiced.

We think S. 3132 is a good initial step, and we offer our support for its enactment.

(Subsequent to the hearing the following additional information was received:)

THE AMERICAN FORESTRY ASSOCIATION,
Washington, D.C., May 2, 1968.

Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR MR. JACKSON: We appreciate the opportunity to present a statement on S. 3132 (control over surface mining) at the hearings on April 30 and May 1, 1968. Since then some additional suggestions have been received from our members. Therefore, we would like to add the following recommendations to our statement regarding S. 3132:

Section 5 (a) page 4, lines 20–21, should read "* * * the Secretary *shall* cooperate with appropriate State agencies in developing and administering State plans * * *."

Section 5 (b), page 5 line 4, should read "* * * Secretary *shall* provide the agency * * *."

Also it is desirable to incorporate in S. 3132 the provisions of S. 217 under Section 3 (a), (b) page 4 as follows:

(a) "* * * The Secretary of the Interior shall designate within the Department of the Interior an officer with primary responsibility to administer the provisions of this Act."

(b) "In administering this Act the Secretary shall cooperate to the fullest extent practicable with other departments, agencies, and independent establishments of the Federal Government, with State governments and agencies, interstate agencies and compacts, and all other interested agencies, governmental and nongovernmental. He is authorized to request from any other Federal agency any information, data, advice, or assistance which he may need and which can reasonably be furnished, and such agency is authorized to expend its own fund for such purposes with or without reimbursement."

Primary responsibility for administering control over strip mining should rest in an agency knowledgeable in all forms of surface mining. This agency should be in the Department of the Interior and not the Department of Agriculture as proposed in S. 3126.

S. 3132 should cover all forms of present and future surface mining as well as reclamation of areas disturbed by past surface mining practices. The bill also should cover all products of surface mining whether they move in interstate or intrastate commerce.

Sincerely yours,

KENNETH B. POMEROY, *Chief Forester.*

STATEMENT OF CHARLES BALL, DIRECTOR, COMMUNITY RENEWAL PROGRAMS, CITY PLANNING ASSOCIATES, INC., MISHAWAKA, IND.

This statement is presented in support of S. 3126, the Mined Lands Conservation Act of 1968, introduced by Senator Nelson of Wisconsin, and is prepared for the hearings of the Committee on Interior and Insular Affairs scheduled for April 30 and May 1.

Of the three bills before the committee, S. 3126 appears most appropriate to the problems and opportunities created by surface mining. S. 3132, the Administration bill, is inadequate since it deals only with the establishment of standards and carries no real enforcement capabilities. S. 217, that of Senator Lausche, is similar to Senator Nelson's bill, but is restricted to coal mining and ignores the equally serious land dereliction problems posed by copper, iron ore, gravel, limestone, sand, uranium and other surface mineral extraction activities.

Federal regulation of surface mining activities backed with adequate funding, enforcement powers and appeal procedures is essential to the reclamation of derelict abandoned mines and the prevention of the continued rape of the nation's landscape. In his remarks before the Senate on March 8, 1968, Senator Nelson cited an estimate that placed the amount of land disturbed by surface mining by 1965 at 3.2 million acres. This figure is probably conservative since this nation does not possess a comprehensive land use inventory such as has been conducted by most northern European countries. Surface mining activities, will all of the attendant problems, are devouring the land of many states like an animal going mad. The consequences are profound, since once disturbed and not restored to useful condition, these lands become a blight in the environment and are not productive.

More is involved in this legislation than the mere desire to restore a pleasant and productive landscape. When coal seams are exposed to air and then to water, sulphuric acid is generated which pollutes streams and lakes and makes the propagation and development of domestic and wildlife difficult, if not unfeasible, and disturbs public water supplies. In some areas a serious safety hazard is imposed by the practice of augering in the side of coal seams and leaving in place an overhang on pillar supports that can easily collapse. Erosion problems are similarly created, the consequence of which are seen in the destruction of lands adjacent to mine operations and in the pollution of lakes and water courses. These are but a few examples of the consequencses of uncontrolled surface mining.

At the same time, one must recognize that surface mining activities are essential to the industrial operations of the nation and that if properly conducted need not scar the earth as they have in the past.

Under the Nelson bill, the presence of derelict lands created by surface mining frequently will provide splendid opportunities for reforestation, the development of recreation sites and other productive land uses if the bill is properly funded and administered.

A clear imperative argues the case for Federal legislation in this manner. State legislation in the past has either been weak or nonexistent, and there is perhaps one strong economic reason for national regulation: in contiguous states that produce minerals for the same market, such as the coal mining activities in Ohio, Pennsylvania and West Virginia, the imposition of appropriate regulations by one of these three states and not the other two would place its mining operators at a competitive disadvantage in relation to coal operators in the two remaining states. Coal is mined at the surface at Mahoning and Columbiana Counties in Ohio for the Youngstown area steel producing market. It is also mined in adjacent Lawrence County in Pennsylvania for the same market. Were either Ohio or Pennsylvania to adopt the required regulations and not the other state, its coal operators would probably be placed in a competitive disadvantage in the Youngstown steel-orented market. Thus, national regulation is indicated as the necessary equalizer.

S. 3126 should not appear as ominous to the coal or other mining industries as its tone suggests. Regulations will be promulgated only in consultation with regional advisory groups composed of representatives of mining and nonmining interests and regulation will probably vary from region to region. The Wyodak Coal Mine, formerly operated by the Honestake Mining Company and now by the Montana-Dakota Utilities Company, near Gillette, Wyoming, is well removed from public view and is on former grazing lands that, at best, were marginal as to their productivity. Regulations applied to that operation certainly would not be restrictive as those that would be imposed on the strip

mines near Youngstown, or in Belmont and Harrison Counties, Ohio. Nor would highly restrictive measures seem appropriate to limestone areas near the surface in the Railbelt area of Alaska where an indigenous cement industry is now economically feasible and would be helpful in strengthening that state's economy. As a generalization, it would appear that any regulations that would flow from S. 3126 would be tailored to the economies of mineral extraction as balanced against the desired restoration and reclamation objectives of the bill.

Were ten cents a ton added to the price of coal for restoration purposes within any economic region of the nation for the task of restoration and reclamation, the impact in benefits would be in geometric proportion to the investment. This becomes a social cost shared by all and of benefit to all.

The only change of significance that I would recommend to S. 3126 would be to include within the purview of the legislation slag and waste dumps. The area immediately east of Deadwood, South Dakota, for example, is blighted by several hundred acres of slag from former gold mine operations and that land is at best of marginal utility. Without restoration, a similar situation obtains in the eastern Ohio and western Pennsylvania.

Finally, I should note that although both the Department of the Interior and the Department of Agriculture have overlapping interests in the matter of surface mining, I would suggest more technology and expertise as to reclamation and restoration is to be found in the Department of Agriculture than in the Department of the Interior, particularly in the U.S. Soil Conservation Service. I would therefore urge in the implementation of this legislation that the primary burden for restoration and reclamation standards and research and development be conducted by the Soil Conservation Service. However, the role of the Department of the Interior, particularly of its Bureau of Mines, certainly is an important one.

Statement of the Conservation Foundation

The Conservation Foundation welcomes the opportunity to comment on the pending legislation dealing with surface mining regulation.

The environmental implications of surface mining are significant, and the Foundation believes that a national policy is necessary to ensure suitable environmental safeguards.

Statement Summary

In summary, we believe that—

1. The cooperative federal-state approach to regulation of all surface mining operations, as embodied in S. 3132 is basically sound;
2. Although limited to future mining, S. 3132 would constitute a good beginning, is administratively workable, and would provide an appropriate responsibility for the Secretary of the Interior;
3. S. 3132 would build upon, and support, the few strong state laws that already exist;
4. To help assure strong state standards and to protect future options, S. 3132 should be revised to prohibit any surface mining that would leave the surface less useful to man than it was before;
5. To stop further environmental damage from surface mining, S. 3132 should require regulation of surface mining as rapidly as possible; effective regulation should begin one year after passage of the act. Other vague time schedules in the bill should be clarified. Preliminary federal criteria for the states are unnecessary and would delay the program; and
6. In addition to regulation of future mining operations, S. 3126 also offers an opportunity for the Congress at least to begin to develop a reclamation program for the millions of acres of land already altered by surface mining. A demonstration surface mine reclamation program should be authorized, enabling the states to conduct, with federal financial and technical assistance, a series of demonstration projects in cooperation with local governments on ways to put this derelict land to work to serve a variety of public needs. In addition, a Presidential task force should be authorized to recommend within one year a comprehensive long-term program for reclamation integrated with other programs including recreation, solid waste disposal and employment.

Our detailed comments follow.

S. 3132 IS A SOUND BEGINNING

Of the three bills being considered by the committee, S. 3126 and S. 3132 are directed toward surface mining alone, while S. 217 concerns only coal mining, both surface and underground. We believe the evidence is clear that controls are needed for surface mining of all kinds, covering a variety of minerals. Consequently, we urge the committee to take the approach embraced by S. 3126 and S. 3132.

In developing a national surface mine policy it is important that Congress not complicate its administration. S. 3126 might do so. Under its provisions both the Secretary of the Interior and the Secretary of Agriculture would be responsible for administering the program. The Secretaries acting together would establish federal standards and criteria for the reclamation of past and future surface mined areas. Together they would approve and constantly evaluate the state plans submitted for future mining operations. Finally, under S. 3126 the two Secretaries, acting individually, would divide the responsibility for technical and financial reclamation aid. In initiating a new federal program we believe that Congress should avoid such a cumbersome administrative approach.

In general The Conservation Foundation supports the approach outlined in S. 3132. Its enactment would be a significant first step toward a more compreshensive environmental protection program relating to past as well as future surface mining.

Under S. 3132 the Secretary of the Interior would cooperate with and provide matching funds for the states in the developmennt of state plans for the regulation of future surface mining. State plan would then be submitted to the Secretary. Those meeting certain listed guidelines would be approved by the Secretary. The Secretary would devise federal regulations for states which do not submit plans, do not abide by the plans submitted, or refuse to make certain revisions deemed necessary by the Secretary.

The bill would establish an advisory group appointed by the Secretary of the Interior. It provides for injunctive relief by the Attorney General to prevent violation of federal standards, or state standards where the interstate commerce is involved. It would authorize the Secretary to conduct and promote research to carry out the purposes of the act, and would establish a Mined Lands Reclamation Fund supported by Congressional appropriations and other fees collected under the act. In addition, the bill would require other federal agencies to regulate and reclaim surface-mined areas on federal lands, provided that the standards prescribed are at least equal to the approved standards issued for the state in which the lands are located.

S. 3132 recognizes the vital role that must be played by the states in regulating surface mining. Recently Kentucky, Pennsylvania, and West Virginia have made significant statutory and regulatory advances toward more adequate environmental protection in surface mining. It should not be difficult, in view of their extensive experience, for these states to expand their laws to encompass all forms of surface mining. An examination of some of the best existing state legislation indicates that enactment of S. 3132 would create no significant legislative difficulties for these states. Indeed, states with progressive legislaion should welcome the requirement that neighboring states must likewise maintain high conservation standards, thus ensuring that there will be no competitive disadvantage resulting from conservation practices.

In requiring state standards and plans for future surface mining operations, the bill follows the general pattern of recent air and water pollution control legislation—that is, the states have the initial opportunity and responsibility to act. The bill recognizes, however, that surface mining controls require simpler administrative arrangements than those necessary to abate air and water pollution. There good reasons for a simpler approach:

1. The two reports by the Department of Interior—the interim "Study of Strip and Surface Mining in Appalachia", and final report, "Surface Mining and Our Environment"—indicate that we know a great deal about how to prevent environmental damage from surface mining opeartions and how to reclaim surface-mined land. There is, for example, no need for federal criteria on the environmental effects of surface mining comparable to that required in the field of air pollution. A requirement for development of such criteria in advance would unnecessarily delay the proposed program.

2. The proposed surface mining controls relate only to future surface mining operations. Whereas air and water pollution control may require the installation of new equipment at established operations, the surface mine program would

affect only future mining, requiring reclamation and conservation practices be integrated into the process of each new operation.

3. Because of the adequacy of existing information and the limited scope of the program, the states need not take long to develop their surface mining plans. Legislation and regulations already developed in some states can be useful to other states. Furthermore, the proposed regulations by the Department of Interior governing surface mining on Interior Department and Indian lands should indicate the kind of approach that would be expected of the states. Finally, the bill itself specifies useful legislative policy guidelines for the states.

SUGGESTED REVISIONS OF S. 3132

It is appropriate at this point to suggest an important revision of these legislative guidelines. Section 7 (a) (1) (A) requires that the state plan include provisions that "promote an appropriate relationship between the extent of regulation and reclamation that is required and the need to preserve and protect the environment."

This difficult language has dangerous policy implications. We know, for example, that the need to protect lands of Appalachia did not in the past appear as necessary as it does today. Does the language quoted mean that we can freely make the same mistakes today, in Alaska, for example, or in remote lands of the Southwest where vegetative cover may be extremely fragile? Is the "need for environmental protection" to be determined in economic terms, and if so in five or 50-year projections?

We know too much history to be shortsighted now. Environmental factors listed by the bill must nowhere be ignored by surface mine operations. No area should be surface mined if doing so will make it less useful to man in terms of future options than it was before. That is the policy all state plans should implement.

Section 7 (a) (1) (A) should be revised to voice this policy, replacing the fuzzy reference to "appropriate relationships" between regulation and environmental protection. In this way the states will have a clear indication of the kind of policy approach the Congress considers necessary it state plans are to meet the requirements of the national policy as set forth in the bill.

For the reasons outlined above, and with the policy guideline change recommended, the Congress should reasonably expect prompt legislative and regulatory response to the act by the states. However, the timetable for action by the states in the bill is too long and at times too vague. We therefore suggest the following changes in Section 7 of the bill, relating to state plans for surface mining controls:

1. We suggest that the Governor of each state be required, within 90 to 120 days after enactment of the bill, to send the Secretary of the Interior a letter of the state's intent to file a surface mining plan. This would enable the Secretary to have an early indication of the number of states for which federal standards will have to be prepared. There is no such provision in S. 3132 as introduced.

2. We suggest that each state be required to submit, after public hearings, its proposed plan for surface mining regulation within one year after enactment of the bill. If no plan is submitted, the Secretary of the Interior should then be required to issue federal standards for that state.

S. 3132 now gives the states a minimum of two years and a maximum of three years after the bill's enactment in which to submit plans. This is an unnecessarily long time period. The suggested one year provision would still permit states to submit a plan at any time thereafter but it would have the advantage of providing interim federal standards and thus prevent possible environmental destruction from unregulated surface mining.

3. We suggest that each state be given 60 days in which to implement its plan after approval by the Secretary. S. 3132 does not specify when the state plan is to become effective. The bill does provide, in Section 9, that "federal regulations shall cease to be effective within the state 60 days after the approval of the state plan by the Secretary." The 60-day period for initial implementation of the state plan would seem to be equally appropriate and would take care of this gap in S. 3132.

4. We suggest that Section 7(b)(1) be amended to give a state 60 days in which to comply after notification by the Secretary of failure to comply or enforce its plan adequately. S. 3132 now requires compliance "within a reasonable time." This is too vague for effective administration.

5. We suggest that Section 7(b)(2) be amended to give a state 60 days in which to revise a previously approved plan as directed by the Secretary. Where the state agency believes new legislation is required, a longer period, up to 180 days, would be appropriate. S. 3132 requires such a revision "within a reasonable time"—a much too vague time period.

One highly significant difference between S. 3132 and S. 3126 is the former's neglect of reclamation needs on lands already surface-mined. We recognize that a meaningful reclamation program would be costly and that current budgetary pressures may prevent enactment of such a program at this time. (The final Department of the Interior report estimated that a basic reclamation program for all surface-mined lands would cost $757 million, and that a more complete rehabilitation program would cost $1.2 billion.)

Nevertheless, S. 3132 offers the Congress an opportunity to begin to develop a reclamation program for land already surface-mined.

TASK FORCE ON SURFACE MINE RECLAMATION POLICY

We recommend that the Congress authorize a one-year study by a Presidential task force to develop recommendations for such a reclamation program. We suggest that the task force report be centered around ways in which local, state, and federal governments could promote the reclamation of land previously surface-mined and, at the same time, derive the most direct public benefit from any public money so spent.

The task force could, for example, examine the relationship between reclamation and recreation opportunities, solid waste disposal problems, and employment needs.

The study could include identification of employment potential by areas, and by job skills which would be needed, and could be integrated with existing public and private manpower training and job-creating programs.

The task force could determine the extent to which the total costs of various public programs might be reduced by fostering these interrelationships. It could study was in which surface-mined lands could be considered in state outdoor recreation plans, and how such lands might be purchased and developed with financial assistance from the Land and Water Conservation Fund, the Open Space Land Program, and other federal and state programs. The task force could recommend funding arrangements, perhaps partly through royalties on mining operations, that could be used for a surface mine reclamation program.

Because of the broad nature of its mandate, the task force should include representatives from federal agencies such as HEW, Labor, OEO, HUD, Agriculture, and Interior, as well as the Bureau of the Budget, and representatives of state and local governments and the private sector.

DEMONSTRATION SURFACE MINE PROGRAM

In addition we suggest that the Congress authorize a demonstration program in cooperation with the states, to test ways in which mined-land reclamation can be integrated with social policies and programs. Such a demonstration program would be limited in scope. It might center around what the Department of the Interior's report noted are the widely scattered, privately owned surface mine sites appropriate only to state or local management after reclamation. Its object would be not only to reclaim the lands. It also would provide a mechanism for coordination of existing federal programs, along with federal planning assistance and supplemental federal incentive grants. Planning and administration of the actual reclamation program would be a state or local function.

Such a demonstration program might require:

1. The Governor to designate a single demonstration surface mine reclamation agency to plan and administer the state program.

2. Federal financial assistance for state planning and grants to supplement existing federal assistance programs.

3. A single federal officer to administer the demonstration program only, appointed by and responsible to the Secretaries of the Interior and Agriculture. The administrator would assist the states in tying existing federal programs into the demonstration projects. He would, in addition, act as liaison between the states and the Presidential task force as useful lessons are learned.

We therefore urge the committee to authorize the creation of a Presidential task force for the purposes outlined above and to authorized a demonstration surface mine reclamation program to encourage and assist pilot projects looking toward broad public use of unreclaimed surface-mined land.

FINANCING

Finally, if the administration of surface mining control programs in states with good legislation is any guide, an annual authorization of at least $20 million appears to be required for the federal program.

STATEMENT OF JOHN L. HALL, ASSISTANT EXECUTIVE DIRECTOR, THE WILDERNESS SOCIETY

Mr. Chairman, my name is John L. Hall, Assistant Executive Director of The Wilderness Society, a 40,000-member national conservation organization with headquarters at 729 Fifteenth Street, NW., in Washington, D.C. The Wilderness Society's objectives are to secure the preservation of wilderness, to carry on an educational program concerning the value of wilderness and how it may best be used and preserved in the public interest, to make and encourage scientific studies concerning wilderness, and to mobilize cooperation in resisting the invasion of wilderness. The Society strives to support all sound programs for the conservation of fish and wildlife, water, scenic, and outdoor recreation resources in order to assure balanced use of our nation's natural resources and the preservation of a quality environment for this generation and generations to come.

We are concerned about surface mining regulations because we know of the damaging effect of surface mining to our environment. We are aware of the vast areas of Pennsylvania, West Virginia, Kentucky, Ohio and Southern Indiana and Illinois where the coal has been mined by stripping and where no reclamation work or inadequate reclamation work has been done. This devastation has polluted the waters, made the land worthless, and has changed the environment of many sections of these states. We are also aware of the effect the surface mining for other minerals including common varieties of minerals can and does have in other parts of our nation. We are shocked at the total disregard some surface mine operators have for the other natural resources and for their fellow human beings. We appreciate the fine work being done by operators in some states who are concerned and who are doing an adequate job of surface restoration.

We endorse the proposed strong federal legislation that will help control and correct the ravaging effects of strip and surface mining. The federal legislation must be as strong as the state legislation now in effect in Kentucky, Pennsylvania and West Virginia so as not to undercut the strong state control in these states. Weak federal legislation would negate the work of the dedicated people in these states who with considerable courage and sacrifice have won such notable victories.

In those states where strong surface mining laws are in effect, it may not even be necessary for the federal government to intervene. The strong federal control is needed in those states that have weak surface mining regulations that do not protect other resources, the environment, and the people.

We are not opposed to mining, for the products of these mines and others are as necessary to us as to anyone. We are aware of the problems that face the coal mining industry in acid mine pollution and in air pollution. However, in some areas we question whether the stripping of coal or iron is worth the price. We ask, are the short term gains worth the long range detrimental effects on our total resources, and on the people who are left with a depressing, and uninviting environment.

We have wondered, can the surface mining industry afford the cost of strong reclamation requirements. The Wilderness Society has been told that, in the states of Kentucky, Pennsylvania and West Virginia where there was much concern expressed by the surface mining industry after the laws were proposed—that the industry is doing a thriving business under these strong requirements. Also, the cost of reclamation is from one tenth to one fifth of what was estimated by the industry.

In our suggestions for this legislation, we are guided by the Department of the Interior's report which recognized five major objectives that must be considered. They are: (1) Water quality control, (2) soil stabilization, (3) elimination of safety hazards, (4) conservation and preservation of natural resources and (5) restoration of natural beauty.

We recommend these specific strong points as part of the federal legislation:

(1) a strong preplanning requirement;

(2) the protection of "esthetic" values;

(3) the minimum bond of $500–$1000 per acre as required by the Pennsylvania statute;

(4) the zoning regulations as provided in the West Virginia law;

(5) the special fee per acre for a reclamation fund for orphaned land such as in the West Virginia statute;

(6) the treble drainage requirement in West Virginia law where damage has been done to others' property;

(7) the requirement in Pennslyvania law that a permit be obtained from the water resource agency in addition to the mining permit;

(8) the degree-of-slope restiction now in effect in Kentucky which restricts mining on slopes greater than 28°;

(9) strong regulations controlling dredging operations;

(10) the inclusion of haulage roads as part of the operation area to be bonded;

(11) the requirement for a prospecting permit as in the West Virginia law;

(12) the requirement that reclamation must be kept current with mining operation;

(13) the refusal to allow mining by an operator whose permit was previously revoked or bond forfeited without correction as stated in the West Virginia law;

(14) the "high wall" and "back filling" treatment required by the Pennslyvania law;

(15) and finally the important provision to protect unique and scenic areas and particularly wilderness areas from the effects of surface mining operations.

We realize the magnitude and importance of the problem you are considering and recommend the adoption of the legislation based on Senate Bills S. 217 and S. 3126 including the provisions described above with emphasize on the protection of unique scenic and natural areas.

We appreciate the opportunity to appear before you this afternoon.

STATEMENT OF SAM S. STUDEBAKER, PRESIDENT, NATIONAL ASSOCIATION OF SOIL AND WATER CONSERVATION DISTRICTS

I am Sam Studebaker of Tipp City, Ohio, President of the National Association of Soil and Water Conservation Districts NACD). Our Association is composed of over 3,000 individual Conservation Districts, which are independent subdivisions of state government, and their asociations in the 50 states, Puerto Rico, and the Virgin Islands.

Since the inception of our program some 30 years ago, the conservation, reclamation, and development of land has been a fundamental purpose of our work. We are curretly assisting over two million farmers, ranchers, and other landowners in controlling and preventing soil erosion and in using land more wisely and productively.

In areas where surface mining takes place, our Districts have taken steps to reduce the damage which results from inadequate restoration of mined sites. With assistance from the U.S. Soil Conservation Service and other agencies, approximately 500 of our Districts in 31 states have provided services to over 5,000 landowners in reclaiming and improving mined areas. In some states, such as West Virginia, Soil and Water Conservation Districts have extensive programs in this field that are most successful.

A truly effective program of surface mine reclamation, however, will not be possible without adequate standards established by law—preferably state law—and a comprehensive long-range program of technical and financial assistance. The scars on our landscape left by past surface mining activities are contributing to flood and sediment damages to roads, streams, water supplies, fish production, farms, and urban areas. Current surface mining operations are damaging and rendering unsightly vast acreages of land.

In our concern for preserving and cleansing our environment, we must not neglect the serious damage resulting from uncontrolled surface mining. NACD believes that there is need for a comprehensive and effective cooperative program in this field, and applauds the sponsors of the legislation on this subject pending before this committee.

Our Association believes that the best approach would be an amalgamation of the best features of the three principal proposals that you are considering: S. 217, S. 3126, and S. 3132. Specifically, we believe that the following considerations are fundamental in establishing a national program of surface mine reclamation and restoration:

1. The program should apply to all lands affected by commercial surface mining of any kind. The problems resulting from coal stripping, gravel quarrying, phosphate mining, or any other form of mineral extraction are similar. We do not believe that any particular branch of the industry should be singled out for attention.

2. It is essential that the program deal not only with the prevention of future damages through the establishment of standards for reclamation and enforcement of those standards, but also the amelioration of damages that are presently occurring due to mining in the past. This will require a program of technical and financial assistance. According to the recent study by the task force representing the Interior and Agriculture Departments and other Departments and agencies, some two million acres of mined land in the United States are urgently in need of treatment. We must, unquestionably, prevent additional land from contributing to problems that will result from unsupervised mining. But we must also rid the landscape of the existing open sores that are now eroding, polluting our lakes and rivers, and creating flood hazards.

3. The problem must be attacked on both public and private lands. Of the lands affected by surface mining to date, about 90 percent are in private ownership. No program can be effective if both types of land are not treated.

4. To be effective, the program must be a joint endeavor of both the Department of the Interior and the Department of Agriculture. Each has experience and expertise that need to be brought to bear on the problem. The Interior Department has long been engaged in the development of efficient mining techniques and the enforcement of standards to promote safety in underground mining.

The Agriculture Department, on the other hand, is the recognized authority in dealing with erosion, land reclamation, and land conservation. Working in cooperation with our Soil and Water Conservation Districts, it has built up a network of technical, financial, and educational arrangements which are being utilized in surface mine reclamation and would be available for an accelerated program. Virtually all of the research on reclaiming surface-mined lands is being done by USDA and cooperating Agricultural Experiment Stations. The Department has 20 plant materials centers where selection, evaluation, and development is in progress on suitable plants and cultural techniques for stabilizing critical sediment source areas, including lands affected by surface mining.

The Soil Conservation Service of the Department of Agriculture has nearly 35 years of experience in the scientific planning of land reclamation and conservation work, including the use of basic soils data, and the utilization of engineering and vegetative measures for restoration, erosion prevention, and site development. SCS has available a corps of nearly 8,000 trained technicians across the country familiar with the application of technology to land problems of this kind. A new USDA booklet, entitled "Restoring Surface-Minded Land," outlines the dimensions of the task and what can be done to solve the problem.

Because of the experience of both agencies, and the contributions they can make, it is essential, in our opinion, that any national surface mine reclamation program utilize both agencies.

5. That reclamation and rehabilitation of mined lands be based upon plans developed on a watershed basis or other appropriate land unit basis by qualified units of local government, such as Soil and Water Conservation Districts, in consultation with private individuals and organizations, and state and federal agencies. Surface-mined areas constitute major environmental disturbances and need to be treated on a drainage area basis.

Soil and Water Conservation Districts are qualified and experienced in preparing and carrying out scientific plans of this kind. They are also sponsors of many regional conservation projects which involve operations and skills similar to those in mined land reclamation—including over 825 watershed

protection projects and 40 Resource Conservation and Development Projects. They are accustomed to working with and coordinating a variety of organizations and agencies in programs sponsored at the local level with state and federal assistance. They are responsible, under state law, for the conservation and development of land, water, and related resources within their jurisdictions.

The 3,000 Districts now operating include virtually all of the privately-owned land in the United States. In each District, there is a resident staff of professional conservation technicians from the Department of Agriculture and other federal and state agencies providing services in accordance with memorandums of understanding. Included are soil scientists, soil conservationists, engineers, geologists, economists, biologists, foresters, and agronomists. There are also personnel engaged in education and the financing of conservation projects. This vast array of talent, experience, and professional competence is at the disposal of Districts and can be utilized in the reclamation of mined lands.

Using Conservation Districts as local agencies in carrying out a national reclamation program would help ensure the most vigorous, competent, and effective program.

6. We would further recommend that the following considerations apply in any national reclamation program to be established:

(*a*) That federal assistance be provided only after determination that the federal, state, or local governments do not intend to acquire the lands involved.

(*b*) That long-term (up to 10 years) agreements between the Secretary of Agriculture and landowners be used to provide for the orderly application of needed measures and practices. This is currently proving highly successful in the Great Plains Conservation Program and is being considered for application in several other programs.

(*c*) That the share of federal financial assistance in reclamation on private lands ordinarily not exceed 75 percent but that higher rates not be precluded where critical public needs warrant it.

(*d*) That public investments in this work be protected by state statutes or by agreement between landowners and the Secretary of Agriculture.

(*e*) That the funds used for the program be new appropriations authorized for the purposes of the act.

The problems we are facing at home and abroad may make it impossible to begin immediately with a program of the magnitude necessary to reclaim our mined lands. But we believe it essential to authorize such a program and begin preparations to attack this problem in earnest once the fiscal situation permits it. And once the program is launched, we would suggest that a definite timetable be established—perhaps 20 years—so that we can look forward to the final completion of this work in an orderly fashion.

Thank you for the opportunity to present our views on this important subject.

Statement of National Association of Manufacturers

This statement is filed on behalf of the National Association of Manufacturers, a voluntary association of business an industrial enterprises, large and small, located in every State.

We appreciate this opportunity to comment on S. 3132. As stated in Section 3 of S. 3132, the "extraction of minerals by surface mining is a significant and essential industrial activity and contributes to the economic potential of the Nation. Surface mining provides vitally needed raw materials and fuel for manufactturing industries.

The economic development of each State has historically resided within the government and the people of the respective State, and this policy has led the Nation to a position of pre-eminent economic strength. S. 3132 would open the door to a large-scale intervention by the federal government in connection with the development and consevation of the natural resources of the respective States, and we respectfully submit that it should be rejected on this ground.

Although Section 7 of the bill would provide each State with an opportunity to formulate a State plan for the regulation of surface mines and the reclamation of surface mined areas located within the State, the Secretary of the Interior would be given a broad power to approve or disapprove the State plan. If the Secretary disapproves the State plan, the Secretary would have the power under Section 8 of S. 3132 to issue federal regulations for the operation of surface mines and for the reclamation of surface mined areas in such State. The bill contains

no procedure whereby a State could appeal a final disapproval by the Secretary, and apparently his disapproval would become final without recourse to any review by any administrative or judicial tribunal.

The Secretary would not only be the lawmaker and administrator, but also would serve as policeman, prosectuor, and jury under S. 3132. Section 13 of the bill provides that if any person fails to comply with the Secretary's regulations within 15 days after notice, such person shall be liable for a civil penalty of $100 per day, and that the Secretary may assess and collect any such penalty. Violation of the regulations would also be made a federal crime to be punished by a fine not exceeding $2,500 or by imprisonment not exceeding one year, or by both. We believe there is no justification for imposing criminal penalties in connection with activities presently being carried out by mining companies in cooperation with State regulatory authorities.

The Secretary would have the right of entry to any surface mine or upon any surface mined area to make such inspections and investigations as he would deem appropriate to evaluate the administration of State plans or to develop or enforce federal regulations. The federal scheme of regulation would also involve a permit system. A federal permit system centrally administered from Washington would have a deadening effect on the dynamic characteristics of our mineral industries.

The broad discretion granted to the Secretary to disapprove a State plan may be seen by analysis of the provisions of Section 7. It is provided that he shall approve the State plan if "(1) He determines that, in his judgment, the plan includes laws and regulations which" do six things. The first of these is that they "promote an appropriate relationship between the extent of regulation and reclamation that is required and the need to preserve and protect the environment." Just what is an "appppropriate relationship?" It is obvious that this is something on which reasonable men could differ, but the Secretary's decision would be final and without review by anyone.

The six items under determination (1) contain other similarly vague and general phrases, such as "adequate mining plan," "in a manner consistent with said mining plan," "reasonably prescribed time limits," "effectiveness of the requirements established," and "adequate measure for enforcement." The "laws and regulations" (presumably both) would have to contain criteria relating specifically to the control of erosion, flooding, and pollution of water; the isolation of toxic materials; the prevention of air pollution by dust or burning refuse piles or otherwise; the reclamation of surface mined areas by revegetation, replacement of soil, or other means; the maintenance of access through mined areas; the prevention of land or rockslides; the protection of fish and wildlife in their habitat; and the prevention of hazards to public health and safety.

There is also a requirement that "The Secretary determines that, in his judgment, the plan includes (A) adequate provision for State funds and personnel to assure the effective administration and enforcement of the plan and if needed, the establishment of training programs for operators, supervisors, and reclamation and enforcement officials in mining and reclamation practices and techniques; (B) provision for the making of such reports to the Secretary as he may require; and (C) authorization by State law and that it will be put into effect not later than sixty days after its approval by the Secretary."

It is also provided that, after approval of a plan, the Secretary can, after certain steps, withdraw his approval of the plan, and issue regulations for such State under Section 8 of the Act. He could also withdraw his approval of the plan and issue his own regulations for such State if the State did not adopt a revision which he deemed appropriate to effectuate the purposes of the Act.

It is apparent that what is proposed is one of the broadest delegations of legislative power ever considered. This would be a delegation of the legislative power of the Congress under which the Secretary of the Interior would be empowered to write a comprehensive surface mining law for the entire Nation. It would also constitute a delegation of the legislative power of each of the State Legislatures, subjecting their efforts in the field of conservation to a review by a federal official who could approve or veto as he saw fit, in whole or in part. If such a delegation of both State and national legislative powers is indeed permissible, under the various State and National Constitutions, it certainly is of dubious wisdom. We believe it is extremely undesirable and should be rejected.

Ironically, Section 3(d) of the Act sets forth a finding and declaration by the Congress "That, because of the diversity of terrain, climate, biologic, chemical, and other physical conditions in mining areas, the establishment on a nationwide basis of uniform regulations for surface mining operations and for the reclama-

tion of surface mined areas is not feasible; . . ." Then, the bill proceeds to establish a mechanism whereby the Secretary of the Interior could impose on a nationwide basis uniform regulations for surface mining operations and for the reclamation of surface mined areas. Section 8 does not set forth any requirement that the regulations promulgated by the Secretary be other than uniform for all States and types of operations. It provides that he shall issue regulations "in consultation with an advisory committee appointed pursuant to this Act," but this is a reference to only one advisory committee, and makes no provision for advisory committees for particular States or particular types of operations. We believe that the diversity declared by the bill itself is sufficient grounds to reject the approach embodied in the bill.

In addition to the objections of the diversity of conditions to be regulated and the virtually uncontrolled power to be delegated to a centralized non-elective official, it is apparent that the interest and activities of the States and of the various affected industries in regard to safeguarding surface mining operations are at an all-time peak. In this connection, we would like to submit for the files of the Committee a copy of "Our Native Land," a basic handbook on the wise use and management of natural resources published by the National Association of Manufacturers. We would especially call attention to the section on "Beautification," which includes a picture of a reclaimed surface mined area illustrating revegetation and recreational opportunities for fishing. The caption on the picture reads: "Beautification efforts are advanced by reclamation programs carried on by surface mining operators. Trees and forage crops turn the land into excellent pasture, and hundreds of lakes have been created like this one in Kansas which abounds with bass, bluegill and perch."

The section on "Beautification" includes a quotation from Mr. Laurance S. Rockefeller, Chairman of the Citizens' Advisory Committee on Recreation and Natural Beauty, at the 70th Annual Congress of American Industry sponsored by the National Association of Manufacturers, which states in part as follows:

"I think a milestone was established when business and industry participated in the recent White House Conference on National Beauty. Leaders from the electrical, steel, automobile, scrap, outdoor advertising, and other industries were there working hand-in-hand with labor leaders, government officials and conservationists. There was some encouraging progress on common solutions to some long standing problems beyond individual interest."

The section on "Beautification" also make reference to "the program of the Mined Land Conservation Conference, a voluntary organization formed by strip mine operators in the 22 states where surface mines are operated, which promotes the restoration of mined lands so that they will not only be productive of trees and forage but also pleasing to the eye."

We would also like to call attention to the article which appeared in the March 1968 issue of Coal Age Magazine entitled "Hybrid Poplars Renew Mined Land." This article tells the story of how research developed a hybrid poplar which is ideally suited for reclamation of surface mined areas because it is extremely fast growing and can grow under extremely dry and adverse conditions. It was written by Mr. John D. Kendig, Forester, Manheim, Pa. This article refers to the fact that "The Central Pennsylvania Open Pit Mining Association's Conservation Division has been working to get many strip-mined lands planted with hybrid populars, being aided by men from the U.S. Forest Service and the Pennsylvania State University.

The article concludes "At the present time, hybrid populars offer a very promising opportunity to clothe spoil banks with a solid vegetative cover that conserves soil, water and wildlife and makes strip-mined areas more attractive. In addition, a renewable resource is introduced on the coal-exhausted lands and with a little care and management it should produce valuable crops of pulpwood, saw timber, and veneer wood, over and over again."

It is obvious that, not only are private industry and the State governments capable of handling all the problems involved—water pollution control, air pollution control, reclamation and beautification, and conservation of fish and wildlife—but are doing so.

On the other hand, a perpetual, overhanging possibility of federal intervention with a set of differing regulations applicable to all these problems would make realistic planning—from both the operational and economic standpoints—practically impossible.

It should be noted that the Secretary of the Interior would presumably not be required to publish in the Federal Register the criteria by which he would

make his determinations of approval or disapproval under section 7 of the bill. This also contributes to a rule of men rather than of laws. An exactly analogous situation has developed under the Water Quality Act of 1965, in which the Congress wisely gave the States an opportunity to develop water quality standards for interstate waters within their respective boundaries. Under that Act, the Secretary of the Interior is directed to make a determination as to whether or not the State standards are consistent with the objectives of the Act. The Secretary has never published in the Federal Register the criteria by which he makes such determinations. As a result, the policy of the Secretary has been expressed in various documents and letters issued both internally and externally to various parties from time to time over the past two years, and considerable confusion has arisen both among state agencies and among industrial companies as to the exact policy which is being followed in regard to these standards. It appears that some of the state standards already deemed to be consistent with the Act are no longer considered as acceptable. The confusing, varying attitude of the Secretary is illustrated by the sentence in his letter of February 15, 1968 to the Governor of Alabama, in which he states:

"In the course of approving the various standards submitted by the states, it has become obvious to me that some of those approved last summer were not of the same quality which we are now requiring."

The record of the Secretary of the Interior in administering an analogous set of provisions relating to water pollution control would appear to demonstrate it would be unwise to establish a similar system in regard to surface mining.

Because of the diverse conditions under which various minerals are mined in various localities; because of the fact that private industry and the State governments are handling the problems involved; and because of the deadening and disrupting effect of both actual and potential regulatory intervention by the federal government, we respectfully urge that the distinguished Committee on Interior and Insular Affairs of the United States Senate not report S.3132 or similar bills.

STATEMENT OF FRANKLIN L. ORTH, EXECUTIVE VICE PRESIDENT, NATIONAL RIFLE ASSOCIATION OF AMERICA

The National Rifle Association of America is highly pleased to have the opportunity to present this statement to the Senate Committee on Interior and Insular Affairs supporting S. 3132, S. 3126 and S. 217, bills for the protection and reclamation of land and waters affected by surface mining.

Mr. Chairman, the National Rifle Association, as the nation's largest sportsmen's organization, represents hundreds of thousands of hunter-sportsmen who are vitally concerned with the provisions of these bills for these measures will be of immense benefit to outdoor recreationists, conservationists and other land and water users alike.

We believe that the "Mined Lands Conservation Act of 1968", S. 3126, which provides for the conservation, acquisition and reclamation of surface and strip-mined areas, will inestimably further conservation and enhancement of our renewable natural resources through the eventual return to productivity of these ravaged lands.

The authorization of federal grants for investigations, experiments, demonstrations, studies and research projects to develop reclamation and conservation practices on strip and surface mined areas and to develop improved mining techniques will prove to be of immense practical value in returning these lands to their highest level of productivity.

Federal assistance provided in this bill for the reclamation and conservation of surface or strip-mined lands will enhance its recreational value in addition to aiding the restration of the country's natural beauty.

The National Rifle Association of America also feels that conservation of natural resources will be furthered immensely through the strong federal leadership voiced in S. 3132, the "Surface Mining Reclamation Act of 1968" in respect to the future regulation of surface mining operations and assistance to the States in reclaiming surface mined areas and in setting up their own programs for regulations and enforcement of surface mining laws. We commend the inclusion of the provision authorizing the Secretary of the Interior to promote, conduct, and accelerate research, studies, surveys, experiments and training in carrying out the provisions of the act as the findings from these activities will greatly improve the effectiveness of the States' regulations.

And since the despoilation of our lands by unregulated surface mining has had a degrading effect on land, water and our economy, we feel that the inclusion into the act the prospect of mandatory federal regulation of the surface or strip-mining activities if an adequate State plan is not submitted within two years and federal penalties for those persons failing to comply with federal surface mining regulations are indeed necessary for the action required to reclaim our ruined lands and to see that further surface mining is conducted in harmony with continuing land usage.

We believe that the long-range comprehensive programs to reclaim lands and water damaged by coal mining, to promote an effective continuing land-use program and to prevent further detriment to the Nation from such mining operations contained in the "Mined Lands Conservation Act of 1957," will be supported by conservationists and sportsmen nationwide.

The integration of reclamation work into the mining cycle with realistic time limits established for the completion of reclamation as provided in the bill will prove to be a definite aid to the prompt return to productivity of the coal minded area for wildlife. The long-range benefits such as halting erosion, pollution, damage to natural beauty and the loss of wildlife habitat are of immeasurable future value. Here too, authorization of federal grants for research projects and the rendering of technical advisory assistance to mining operators in States with approved standards for mining, reclamation, conservation, portection and management of coal mined lands, will provide an excellent base for new knowledge to be used in the reclamation and conservation of lands and waters adversely affected by the coal mining operations.

The non-renewable minerals may have been stripped from the surface of strip-mined lands but we feel that passage of the proposed bill will be of the highest value to renewing the land's productivity once more for recreational purposes. Again, Mr. Chairman, we would like to express our unequivocal support of these bills, S. 3132, S. 3126 and S. 217. In terms of public benefit, logic and fairness, this proposed legislation ought to be made public policy and public law.

Senator BURDICK. The committee will recess until 9 o'clock tomorrow morning.

(Whereupon, at 3:55 p.m. the committee recessed, to reconvene at 9 a.m., Thursday, May 2, 1968.)

SURFACE MINING RECLAMATION

THURSDAY, MAY 2, 1968

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 3100, New Senate Office Building, Senator Lee Metcalf presiding.

Present: Senators Anderson, Metcalf, and Fannin.

Also present: Jerry T. Verkler, staff director; Stewart French, chief counsel; Porter Ward, professional staff member, and E. Lewis Reid, minority counsel.

Senator METCALF. The committee will be in order.

This is a continuation and I hope the conclusion of the hearings on S. 3132, S. 217, and S. 3126. You have all been very patient to wait through 2 days of hearings and we are delighted to see you this morning. The first witness is Dr. Agnew, director of water resources research at Indiana University. Dr. Agnew, we are grateful for your patience and we are glad to have you here.

STATEMENT OF DR. ALLEN F. AGNEW, DIRECTOR, WATER RESOURCES RESEARCH CENTER, INDIANA UNIVERSITY

Dr. AGNEW. Thank you, Mr. Senator. Senator Metcalf, I should like to make a few remarks here regarding my personal background and highlights of my prepared statement. I will not read the statement.

Senator METCALF. We would be delighted to have that sort of material in the record and to know about your expertise.

Dr. AGNEW. Thank you. I would be pleased to answer any questions, too. My name is Allen F. Agnew and I represent and I am director of the Indiana University Water Resources Research Center, where I am also professor of geology and I have held this position since 1963. Previous to that I was director of the South Dakota State Geological Survey where 50 percent of our work was dealing with research and water matters.

At that time as a member of the Western Governors Mining Advisory Council I not only had the pleasure of working with persons in your State and in several of the home States of other members of this commmittee, but also had the opportunity to observe first hand the differences that exist between the physical situations and the processes of mining, the occurrence and the production and the use of these materials, these natural resources of ours, throughout the different parts of the country.

Before I went to South Dakota in 1955 I worked for the U.S. Geological Survey for many years in the lead and zinc mining districts in Wisconsin, Illinois, and Iowa, and in California and Iowa I worked in ground water.

Before that I had begun my professional career with the Illinois State Geological Survey in 1939, where I worked with coal and with oil and gas matters, so I feel somewhat at home with both mining and water matters.

Taking a brief look at some of the highlights of my prepared statement which you have before you, on the first page I introduce the philosophical goals that we have as well as the practical goals, the philosophical goal of attempting to maintain clean streams and restore scenery, and the practical goals of attempting to do this at the least possible cost to ourselves and our economy.

Unfortunately, with regard to the matter of surface mining, we apparently want to have our cake and eat it too. We wish to keep our streams clean and to restore the land to an enjoyable state and we want to do this at minimum cost.

Attempting to achieve these goals both the State regulatory agencies and the mining industry have been working on this problem for a long time.

The coal mining industry, for example, has been reforesting and otherwise reclaiming surface-mined land for more than 40 years and several other States, as you have heard and as you know the last couple of days, have enacted recent legislation and are administering new regulations all directed toward this matter of providing cleaner water and better reclaimed land.

The great differences, if I may depart here for a moment, in physical conditions in different areas of the country demand different approaches to the problem and this can best be done, I believe, at the State level.

Turning to page 2, as you well know, many of these individual States have already enacted legislation for this purpose in the past few years and they are currently considering revisions. I think it is unfortunate that Senate bill 3132 does not recognize this.

This point was well brought out I believe in the Department of the Interior's report, "Surface Mining and Our Environment," at pages 98 and 99, but the legislation itself does not recognize this.

Senator METCALF. Do you mind my interruption, Dr. Agnew?

Mr. AGNEW. Go right ahead, sir.

Senator METCALF. Will you point out where there is a failure to recognize that and make a suggestion as to how to remedy that failure?

Mr. AGNEW. Well, in some of the introductory sections of the legislation, I believe that such introductory material could well be taking cognizance of, as has been done with other legislation, the efforts that have been carried out and the progress in the various States.

Senator METCALF. I didn't draft this bill. I think this came up from the Department.

Mr. AGNEW. Yes, sir.

Senator METCALF. It is a bill from the administration. However, as you know, those whereas and so forth which are prefatory and preliminary in the bills are of no legal consequence, I used to try to strike them out in executive sessions when I first came to Congress, but I

have given up because everybody wants to make a speech in favor of his bill. I am sure that those of us who are concerned with this problem of surface mining are also aware of the progress that you are talking about and are interested in having the States do the job. It is only because of the failure of some States to do the job that this legislation has been introduced to provide for Federal regulations at all levels.

From time to time you have heard me mention the Federal Coal Mine Safety Act, which was passed before I came to Congress. Congress passed a Federal Act and made the States subject to Federal inspection, but then turned the inspection and so forth over to the respective States if they passed acts that complied with cetrain standards.

That was also done in the Nonferrous Mine Safety Act. I introduced a bill for a severance tax, as you probably have heard mentioned and know about, which will try to encourage all the States at the various levels to impose the severance tax. Then no one will be able to say, "Well, we can't mine coal because of the 5-percent tax so we will move over into some other State and mine coal. I would like to have you supplement and point out what we should do in this case because I think the members of this committee want to do just exactly what you are saying.

Mr. AGNEW. Thank you, Mr. Senator. I appreciate that and I believe yesterday and the day before a couple of the witnesses have mentioned the fact that, although they appreciate the sentiments and the feelings of the members of this committee now and of Secretary Udall, it is the change in personnel as times goes on that causes them to wish to have this kind of wording inserted.

Senator METCALF. I have heard that several times. I hope that that is not an expression as to the current political climate, a prediction of a change of administration.

Mr. AGNEW. I don't think so, sir. I am recalling the time when I worked in the mining district in Wisconsin. I was working with the U.S. Geological Survey then and we were attempting to get mine records from some of the mining companies. They were very tight with their information because they figured they had spent their own money for it, so why should they make it available to the Federal agency and to all mining companies? We told them that we would protect the sanctity, the confidential nature of these records, and what they said is substantially what you said here, that we trust you personally, but we don't know who is going to come along after you.

Senator METCALF. Thank you. Pardon me for interrupting.

Mr. AGNEW. The action that we have been speaking about here has been directed mainly at the problem of acid mine drainage by several State and Federal agencies. The problem of acid mine drainage, along with some attempt at reclamation, reforestation, seeding, et cetera, has been studied by Federal agencies, individual agencies such as the Federal Water Pollution Control Administration and Interior, and some joint efforts have been made, such as the demonstration projects in West Virginia and Pennsylvania, and not too long ago by several Federal bureaus and a couple of States. In addition both Federal and State agencies have been active in the reforestation and reclamation field.

We have had the Department of the Interior's report, "Surface Mining and Our Environment," referred to many times during the

past couple of days and I would like to note it again. It published this report recommending that we do two things, that we prevent future damage and repair past damage, and then it outlined the need for both fundamental and applied research to "insure technological progress in mined-land reclamation and conservation."

The report went on to cite several areas in which fundamental research should be expanded and I would like to stress two of them that I will speak briefly about, acid formation and ground-water hydrology.

This report noted that applied research, in addition to fundamental research, should be investigated in several different areas. These I have itemized here, and stated that demonstration sites should be provided.

Senate bill 3132, as you know, would provide the authority to put some of these recommendations into practice. This legislation provides that State plans for regulation of surface mining should be formulated, and, going on down, it provides for a system of permits, control of adverse effects, reclamation of disturbed areas, evaluation of environmental changes, and adequate funding and staffing for the program, including enforcement. Indiana University Water Resources Research Center supports these provisions.

With regard to another provision, however, that State plans must be submitted to the Secretary of the Interior for approval, one might question, as I do, the advisability of such apparently complete Federal control over regulatory matters, as specified in sections 8 and 9 of S. 3132, which belong, first of all, to the States.

It is true that the bill provides ample mechanisms for the States to take the necessary positive steps which would avoid such heavy reliance on the Federal Government. These provisions should assure that we do continue to move toward this goal of the best reclamation of surface mined areas; but even if it is held advisable that such Federal control should be exerted, we at Indiana University question the 2-year time limitation for the State to develop its approved regulations, else the Secretary of the Interior will develop his own set for that State.

We question the present state of knowledge of many facets of the relationship of surface mining to the environment which we think is not sufficient to permit adequate regulations to be written regarding those variables. This knowledge is being provided by current research, but often such research not only modifies previous views but may even threaten the existence of some of our sacred cows.

Therefore, any set of regulations, whether they are Federal or State, should be looked upon as only provisional or temporary and subject to modification as the results of research become available. Accordingly, I should like to urge the committee to consider providing for a national biennial review of research results with the view of possible revision of the State laws and regulations of surface mining reclamation.

At this point, by the way, I might cite again the surface mining report of the Department of the Interior is stressed on page 76 and this would refer to section 14 of the act.

Several examples of the sacred cows that I just mentioned could be cited in the area of hydrology as related to surface mining; but I

will only mention a couple that deal with the quantity of water as a result of research that we have done at Indiana University under Mr. Don. M. Corbett.

This previously cited Department of the Interior report mentioned our work on page 64 which showed that surface mining activity had a beneficial hydrologic effect by continuing to provide streamflow during dry weather when streams in unmined areas went dry for periods of several weeks. This observation was corroborated in western Kentucky in the summer of 1967 by the U.S. Geological Survey, which is the same agency that had published the report on Beaver Creek in eastern Kentucky that reached opposite conclusions.

In eastern Kentucky their conclusions were that the surface mining industry accentuated sedimentation, it aggravated the flood problem, et cetera. In western Kentucky the same agency, and also we in Indiana, have found that apparently not only is water supply created and supplied at low flow times of the year to the streams, but also these ridges of strip mining material act as flood retarding structures at certain times of the year. This again just points out the differences in the physical environment, the different conditions that must be taken into account.

The other sacred cow has to do with the quality of water produced in the surface-mining process.

Tuesday, I believe it was, one of the speakers equated yellow boy, the yellowish brown precipitate on the bottom of streams, with acid. Now, we in Indiana University and the Federal Water Pollution Control Administration people have found that this association does not necessarily hold true.

A stream that runs yellow may have a precipitated mixture of colloidal iron hydroxide and iron carbonates but it does not have to run high in acid or sulfate.

On the other hand, a stream that looks very clear could be a stream of bad acid, pH, or bad sulfate, even if it doesn't have a yellow color. This, I believe, is another one of our sacred cows that we have to be aware of.

Anyway, although we all recognize that acid-mine drainage is coming from surface-mined areas, it does have many sources, such as old mine shafts, mine-haulage roads, old mine-waste piles, and so forth, and it need not be caused by the present surface-mining process if the recommendations of both the coal industry and the State regulatory agencies are being followed.

Nevertheless, despite these many sources, the causes of acid-mine drainage can be isolated by a careful study.

Here I think I would like to briefly mention a statement by Secretary Udall a couple of days ago. He said that in Appalachia it poisoned most of the rivers there. This was his quote. "The most poisonous effect I know of is acid-mine drainage. In Appalachia it poisoned most of the rivers there."

But I looked over the Appalachia study, which is embodied in U.S. Geological Survey Circular 526, again because I didn't recall that statement in there. I found that this study showed that in only 60 percent of the reconnaissance locations in that study, and they admitted it was a reconnaissance study because of the great need f
here, the water did not meet the drinking water standa
Public Health Service. This is cited in the abstract to that re

You and I know that drinking water standards and being poisonous are two different things. For many years when I lived in the West I drank water that would not qualify—all the time I drank it—by drinking water standards and I don't feel that I have been unduly poisoned. I feel that our choice of terms, our choice of words here, might best be looked at pretty carefully.

However, mere generalizations are not enough. I have another citation of a generalization from a very respected agency, from the publication "Soil Conservation." I am going to be praising the Soil Conservation Service in just a minute; but I would like to point out that in the January 1968 issue here is a quotation from page 143 of the magazine "Soil Conservation." It says:

"The pH of water"—it is talking about the saline content—"in streams which carry mine drainage is consistently below five and frequently three or lower."

Now, the Department of the Interior report, the massive compilation we have talked about, on page 24 says, on the other hand, that more than 50 percent of the streams had a pH of five or less, so in one case we are talking about apparently 100 percent of the streams, and in the other case, just more than 50 percent. In the one case we are saying pH worse than three and in the other case pH worse than five. There is a large difference here in the way we cite these figures.

That is what I am saying: mere generalizations are not enough. The quantity of acid load calculated for a stream, when based on inadequate sampling, is not only highly erroneous but causes us to adopt unwarranted and ineffectual means of remedying the problem.

Indiana University has recently prepared a report that will be given at a technical meeting here in a couple of weeks. This report points out that when you take mean daily flows of streams and calculate the acid load on the basis of a 24-hour mean daily flow, you have taken the sample at just one instance during that 24-hour period. It is very necessary that you take an instantaneous discharge measurement of the stream at the moment you take the sample to run the water quality analysis because that water quality analysis is valid only for the amount of water that is flowing in that stream at that moment, not during the whole day or sometimes during the mean month or even the mean yearly data if these are all the data we have available. I am not saying that we should not use these data, but we should know the restrictions or the tolerances within which these data are applied.

In any event, in our recent study in western Indiana, using the instantaneous discharges that we were able to measure with the Federal Water Pollution Control Administration people in the field at the time we took the samples, we have found that there would have been errors as great as 200 percent if we had taken the mean daily discharges. Here again is one of our sacred cows or one of our warnings on the type of data that we gather and the type of interpretation that we make from these data.

Continuing at the bottom of page 5 of my statement the woeful inadequacy of such data is amply documented in a second report that is being written right now by Mr. Corbett and myself concerning a research project that is an excellent example of voluntary cooperation of industry and several Federal and State agencies.

This is in the Busseron Creek Watershed, and there is an index map attached at the back of my statement here if you wish to refer to it, Busseron Creek Watershed in western Indiana, which is a Public Law 566 project of the U.S. Soil Conservation Service.

Because of the 26 projected flood-control structures in this area that contains underground mines, part of which were surface mined, part are now being remined, and part will probably not be mined in the future this is a natural laboratory to study and evaluate the effects of surface-mining activity on a small watershed project.

Mr. Kenneth Grant, who you recall was one of the gentlemen testifying a couple of days ago—he was then Soil Conservation Service State conservationist for Indiana—saw the possible applications of this study to other small watershed projects in areas of surface mining and his agency provided funds to construct and install six stream-gaging stations in this watershed. The construction was done by the U.S. Geological Survey and the stations became part of the cooperative network of that agency, the USGS, and the Indiana Department of Natural Resources, which will now have to pay the cost of maintaining them.

In addition, Mr. Max Noecker, chief of the Evansville Field Station of the Federal Water Pollution Control Administration, accepted the challenge of obtaining such closely controlled data to supplement his agency's studies. This group has made countless sample runs and has analyzed their samples together with many more that have been provided by our university personnel.

Many of these sample runs were made jointly in the field and numerous conferences have been held regarding the relationship between quantity and quality of water. This has resulted in very close cooperation in the acquisition and interpretation of a huge amount of data.

The Indiana State Board of Health, even though it has limited funds for such work, has shared in some of the sampling and analytical efforts, and just as important, the three mining companies that are supporting our research—and these three are Ayrshire Collieries Corp., Enos Mining Corp., and Peabody Coal Co.—have willingly permitted their personnel to work with us in identifying chemical problem areas and have supplied much critical information.

Well, with this natural laboratory of the Pusseron Creek watershed we have learned several things that cast a cloud over some of our cherished beliefs. Four of these are cited in the following paragraphs and I will just mention the names of them and you may read them at your leisure.

Impoundments, such as the Soil Conservation Service reservoirs, of acid waters in permanent-pool reservoirs that have no outlet-regulatory mechanism may provide no relief from acid-mining drainage. In fact, during periods of no flow, which are common in late summer and fall, downstream acid conditions may really be aggravated if there is a flash-flood runoff that stirs up this stored water in a reservoir.

In an acid-producing area, acid water is not discharged from all mines and by careful study we can isolate the troublemakers and also those that are good, and we think that we can use the water that is impounded by the mining companies as part of their processing as a regulatory mechanism to help dilute some of the bad water at various times during the water year.

Point 3. In watersheds that contain acid water, some areas of surface mining do not produce acid and can be isolated, and this was the point I was just mentioning about regulation.

The fourth point regards "flushouts" and here we have actually very little information. We have a lot of generalizations but we have very little specific information. Our study in western Indiana shows that a flushout, by the way, is due to a sudden surge of runoff caused by a real intense storm or possibly due to the inadvertent dumping of a reservoir or something like that. A flushout can flush into the streams the acid-forming, iron-bearing—if you want to consider color—materials that are collected on the banks or on the flood plain since the last storm. It can also do it by aggitating the acid-forming and iron-bearing materials that have settled out on the streambed during the sustained periods of low flow and thus the acidity and iron content of a stream can be increased by the introduction of nonacid and noniron waters long before the acid waters and the iron contributions from known sources could reach this point of sampling.

Well, these aforementioned illustrations have discussed only the hydrologic facets of surface mining but, nevertheless, they are basic to other reclamation facets. Furthermore, they are examples of need for additional research to provide new answers to old questions that have been incorrectly answered in the past, and to reinforce other answers that have been standing on rather shaky ground.

This, after all, is the purpose of all research, to provide new knowledge, as you know, and in the Busseron Creek watershed of western Indiana we have a marvelous natural laboratory for continued research and demonstration of surface-mining reclamation.

Many other universities are studying additional phases of reclamation. We heard some of this yesterday from Mr. Leirfallom from Minnesota, about the work that his State agency is sponsoring, and from Mr. Eckles, I believe in Colorado. His work is being sponsored at Colorado State University.

These other univesities are studying the botanical effects of reforestation. They are investigating the biological effects of the surface mining process such as wildlife, and here, by the way, I would like to recall a statement that Senator Nelson made a couple of days ago when he was talking about the fact that 34 percent of the land reclaimed is a misleading figure, that half of the reclamation is natural.

Then he went on to say it is a green lie. It has crabgrass and quackgrass and so forth, and then he made the statement that I want to take issue with.

He said surival of wildlife is not provided for. Only sparrows and rodents inhabit that country. I am afraid that Senator Nelson hasn't visited much of the strip mining area that I have seen because this is a wildlife habitat. We have deer. We have all sorts of small animals and birds, and these are areas where people are going to attempt to build summer cottages for recreational purposes.

So here again, I think is a generalization that seems to creep into the statements that appear in the press and many people read, but if we analyze them closely we can find different interpretations and exceptions to them.

In addition to the biological effects, some people are studying the physical rehabilitation of the cast-overburden areas, other people are

studying the chemistry of the waters, but relatively little attention has been paid to the total hydrologic picture, the total water picture of the problem of surface mining. The Indiana University research results have shown that this phase of the effects of surface mining on the environment is providing many new answers and some of them have been startling ones.

The results of this research have already provided significant contributions to our enjoyment of living, as we have seen in the testimony given the last couple of days and also as is shown in the Department of the Interior's report.

There are three things that I want to stress that can result from the hydrologic aspect of surface mining. One is water supply. We can cite, and I believe one of the witnesses did cite, a city that was receiving a water supply from a blast-cut lake in one of the mining areas in Indiana, I believe this was. In addition there are many unknown cities downstream that are receiving their water supply at low-flow times of the year when the streams are low and this water is bleeding off from the piles of cast-overburden or spoil banks.

We feel that these create a natural man-made ground water acquifier because we have the moutainous areas or the hills of disturbed heterogeneously mixed material that is open and porous. It receives the precipitation and it builds up a ground water mound underneath it and when the streams go dry in the unmined areas late in the summer and the fall this water continues to bleed off into the streambeds and feeds the cities downstream whether they know it or not. They probably don't have cognizance of the fact that this is where their water is coming from, but they have been drinking it for years.

The next point is flood control. Flood control obviously depends upon the physical situation but nevertheless we have found that flood control is very definitely a factor that should be investigated. In a report published a year and a half ago I cited this. This is a report called "A Quarter to Zero," that was published in the Mining Congress Journal and, as I mentioned, the paper that is to be given next week will dwell a little bit more on this particular facet.

The recreational facet of hydrology, of course, is obvious to all of us because even in the arid States of the West, if we do not possess a boat that we can haul on a trailer, now we feel somewhat out of place. Certainly in the Eastern part of the country, where the precipitation is greater and where we normally think of hydrologic problems as being much greater, recreational advantages are just as important.

Certainly, much additional research needs to be done in all of these areas by universities, by industry, and by governmental agencies. With the answers thus produced, we will be able to understand more fully the total effect of surface mining on the environment and to design better ways through which this process can and should be regulated.

In the meantime, awareness of our ignorance of the answers to some of these questions and awareness of the need for acquiring such answers should provide the incentive for us to enact worthwhile legislation such as that embodied in Senate bill 3132, which the Indiana University Water Resources Research Center recommends, subject to the reservations and modifications that I have discussed, dealing with Federal versus State regulations, and with the need to reevaluate

these regulations every 2 years on the basis of new knowledge that results from research.

Thank you, Senator.

Senator METCALF. Thank you very much, Dr. Agnew.

Senator Anderson?

Senator ANDERSON. No questions. It is a very good statement.

Senator METCALF. I think all of us appreciate the scholarly statement that you have presented. You have also raised some questions about, I suppose you could say, precipitant action in dealing with water erosion. However, even though we know some of the testing has been inadequate and some of the sampling has been not quite accurate, you have acknowledged that there are conditions that need to be alleviated.

Mr. AGNEW. Oh, yes.

Senator METCALF. And while we may in the next 2 or 4 or 6 years or in the next decade, as a result of the kind of activity that you are carrying on at Indiana University, rather radically change some of our concepts and some of our ideas, it seems that, nevertheless, we should go forward with some legislation or at least encourage the States to go forward with some legislation.

Isn't that the sum of your remarks?

Dr. AGNEW. Certainly encourage the States, from my viewpoint, and take full cognizance of the fact that many of the States have just done this in the last couple of years. We in Indiana, although the new law has been in effect only a short time, are finding it very workable.

Senator METCALF. Thank you very much. I know that this discussion of the activities that you have had in your research will be very helpful to the committee.

Dr. AGNEW. Thank you, sir.

Senator ANDERSON. May I just say we have had hearings previously on the same subject matter many years ago.

Senator METCALF. Yes, Senator; this is not completely the new idea that some of the people have advanced here. This has been before the Congress at other times and the problem is still with us.

(The full statement referred to follows:)

STATEMENT OF DR. ALLEN F. AGNEW, DIRECTOR, WATER RESOURCES RESEARCH CENTER, INDIANA UNIVERSITY

THE IMPORTANCE OF HYDROLOGY IN SURFACE MINING

The problem of clean streams and restored scenery is recognized as important to us all, as we search to obtain greater enjoyment from our environment today. In addition to this philosophical goal, many of us attempt to be practical also, and recognize the importance of defining the degree of cleanliness and reclamation that we hope to achieve and are willing to pay for. Similarly, most of us recognize the importance to the Nation of the fossil fuel, coal, which provides us with much of the energy needed to produce the material possessions that we hold dear.

With regard to the mater of surface mining, then, we want to have our cake and eat it, too. We wish to keep our streams clean and to restore the land to an enjoyable state, and we wish to do this at minimum cost. In attempting to achieve goals, both the State regulatory agencies and the mining industry have been working on the problem, for a long time; the coal-mining industry has been reforesting and otherwise reclaiming surface-mined land for more than 40 years, and several States have been enacting new laws and State agencies have been administering new regulations, all directed toward the matter of providing cleaner water and better reclaimed land.

Many individual States have enacted legislation for this purpose in the past, and are currently considering revisions. It is unfortunate that S. 3132 does not recognize this. Recognition of the need for coordinating efforts, and for rectifying problems of long standing, has caused several Federal agencies to take action regarding the matter of surface mining and the environment.

This action has been directed mainly at the problem of acid-mine drainage, both by individual Federal agencies such as the Federal Water Pollution Control Administration, and by joint efforts such as the demonstration projects involving the FWPCA, the U.S. Bureau of Mines, the U.S. Geological Survey, and the States of West Virginia and Pennsylvania. In addition, the Federal and State agencies have been active in the reforestation and reclamation field.

The U.S. Department of the Interior report, "Surface Mining and Our Environment", published a year ago, recommended that we (1) prevent future damage and (2) repair past damage, and outlined the need for both fundamental and applied research to "insure technological progress in mined-land reclamation and conservation". Areas in which fundamental research should be expanded were listed (Report, p. 107) to include: (1) acid formation, (2) nutrient deficiency, (3) bacterial action, (4) ground-water hydrology, and (5) classification of waste or spoil-bank materials. The report noted (p. 107–8) that applied research areas which should be investigated include: (1) improving mining equipment and procedures, (2) slope stabilization, (3) erosion control, and (4) prevention of acid-water production. The report also recommended (p. 108) that demonstration sites should be provided to: (1) explore research possibilities, and (2) educate personnel in effective mined-land conservation techniques.

Senate Bill S. 3132 would provide the authority to put some of these recommendations into practice. This legislation provides that State plans for regulation of surface mining should be formulated, designed to promote a balance between natural resources value and environmental values. It provides for: (1) a system of permits based on mining plans, (2) control of adverse effects of surface mining, (3) reclamation of disturbed areas, (4) evaluation of environmental changes, and (5) adequate funding and staffing for the program, including enforcement of regulations. The Indiana University Water Resources Research Center supports these provisions.

With regard to another provision, however, that State plans must be submitted to the Secretary of the Interior for approval, one might question the advisability of such apparently complete Federal control over regulatory matters as specified in Sections 8 and 9 of S. 3132, which belong, first of all, to the States. It is true that the bill provides ample mechanisms for the States to take the necessary positive steps that would avoid such heavy reliance on the Federal government, and these provisions should assure that we do continue to move forward toward the goal of the best reclamation of surface-mined areas.

Even if it is held advisable that such Federal control should be exerted, we seriously question the two-year time limitation for the State to develop its approved regulations, else the Secretary of the Interior will develop his own set for that State. Our question, here, is that our present state or knowledge of many facets of the relationship of surface mining to the environment is not sufficient to permit adequate regulations to be written regarding those variables; this knowledge is being provided by current research, but often such research not only modifies previous views but may even threaten the existence of some of our sacred cows. Thus any set of regulations, whether Federal or State, should be looked upon as only provisional or temporary, and subject to modification as the results of research become available.

Accordingly, I should like to urge the Committee to consider providing for a national biennial review of research results, with the view of possible revision of the State laws and regulations of surface-mining reclamation.

Several examples of the "sacred cow" mentioned above could be cited in the area of hydrology as related to surface mining, but I will mention only a couple dealing with quantity and quality of water, as a result of our research by Mr. Don M. Corbett of the Indiana University of Water Resources Research Center. The previously cited Department of the Interior report noted (p. 64) that our work in Indiana had shown that surface-mining activity had a beneficial hydrologic effect by continuing to provide streamflow during dry weather when nearby streams in unmined areas were dry for periods of several weeks (Don M. Corbett, "Water Supplied by Coal Surface Mines". Indiana University Water Resources Research Center, Report of Investigations No. 1, 1965, 67 pages). This observation was corroborated in 1967 in western Kentucky by the U.S. Geological Survey's

study of the Tradewater River Basin, (U.S.G.S. Professional Paper 575–A, p. A30, 1967). This information is contrary to that obtained by the same Federal agency in its study of the Beaver Creek Watershed in eastern Kentucky (U.S.G.S. Professional Papers 475–A and B, 1963 and 1964), and which had been quoted by others as widely applicable—a sacred cow. This illustration shows graphically what mining men have known for some time and what hydrologists have come to realize—that the hydrology of the surface-mining process in different topographic and geologic regions will likewise be different; accordingly, laws and regulations must take this variability into account.

The other sacred cow has to do with the quality of water produced in the surface-mining process.

Although we all recognize that acid-mine drainage is coming from surface-mined areas, it has many sources—such as old shaft mines, mine-haulage roads, and old mine-waste piles—and need not be caused by the present surface-mining process if recommendations of both the coal industry and the State regulatory agencies are followed. Nevertheless, acid-mine drainage exists and its causes can be isolated by careful study.

However, mere generalizations are not enough. The quantity of acid load calculated for a stream, when based on inadequate sampling, is not only highly erroneous but causes us to adopt unwarranted and ineffectual means of remedying the problem. It has been common practice by regulatory agencies to compute acid loads from mean-daily discharges when available (U.S.G.S. records provide this information for many gaging stations in surface-mined areas), or from even more general data, such as mean-monthly or even mean-annual discharges.

The woeful inadequacy of such data is amply documented in a second report being written now by Mr. Corbett and myself, concerning an Indiana University research project that is an excellent example of voluntary cooperation of industry and several Federal and State agencies. The Busseron Creek Watershed, in western Indiana, is a small-watershed project of the U.S. Soil Conservation Service. Because its 26 projected flood-control structures are in an area that contains underground mines, part having been surface mined and part now being re-mined, and part probably will not be mined, it is a natural laboratory to study and evaluate the effects of surface-mining activity on a small-watershed project.

Mr. Kenneth Grant, then S.C.S. State Conservationist for Indiana, saw the possible application of this study to other small-watershed projects in areas of surface mining, and his agency provided funds to construct and install six stream-gaging stations in the watershed by the U.S. Geological Survey. These stations became part of the network of the U.S.G.S.-Indiana Department of Natural Resources cooperative water-resources program, and yearly operation-and-maintenance costs are being paid therefrom. Mr. Max Noecker, Chief of the Evansville Field Station of the F.W.P.C.A., accepted the challenge of obtaining such closely controlled data to supplement his agency's studies, and his group has made countless sample runs and has analyzed their samples together with many more that have been provided by Indiana University personnel; many of the sample runs were made jointly, and numerous conferences regarding the relationship between quantity and quality have been held, resulting in close cooperation and in the acquisition and interpretation of a huge amount of data. The Indiana State Board of Health, though with limited funds for such work, has shared in some of the sampling and analytical efforts. And just as important, the three mining companies that are supporting our research—Ayrshire Collieries Corporation, Enos Mining Corporation, and Peabody Coal Company—have willingly permitted their personnel to work with us in identifying chemical problem areas and have supplied much critical information.

With this natural laboratory of the Busseron Creek Watershed, we have learned several things that cast a cloud over some of our cherished beliefs; four of these are cited in the paragraphs that follow:

1. Impoundment of acid waters in permanent-pool reservoirs may provide no relief from acid-mine drainage downstream. In fact, during periods of no flow, which are common in late Summer or early Fall, downstream acid conditions may be aggravated by the impact of flash-flood runoff into the reservoir that could stir-up the stored water.

2. In an acid-producing area, acid water is not discharged from all mines; by careful study the offenders can be isolated from the good thus permitting better reclamation efforts.

3. In a watershed that contains acid water, some areas of surface mining do not produce acid and can be isolated; in fact, if the discharge of this good-quality

water could be regulated, it could provide the dilution water needed to alleviate the acid problem farther downstream during much of the time.

4. "*Flushouts*" due to large and sudden increases in runoff caused by sudden excessive precipitation, or due to inadvertent causes such as the "dumping" of a reservoir, can drastically change the quality of the water in the receiving stream. This appears to be caused by at least two factors: (1) by flushing into the stream the acid-forming materials that have collected on the banks and on the flood plain since the last storm of consequence, and (2) by agitation of acid-forming materials that had settled out on the streambed during sustained periods of relatively constant low flow such as droughts. Thus the acidity and iron content of a stream can be increased by the introduction of non-acid and non-iron waters long before acid and iron contributions from known sources could have reached the point of sampling.

Although the aforementioned illustrations have discussed only the hydrologic facets of surface mining, they are basic to other reclamation facets; furthermore, they are examples of the need for additional research to provide new answers to old questions that have been incorrectly answered in the past, and to reinforce other answers that have been standing on rather shaky ground. This, after all, is the purpose of all research—to provide new knowledge—and in the Busseron Creek Watershed of western Indiana we have a marvelous natural laboratory for continued research and demonstration of surface-mining reclamation.

Many other universities are studying additional phases of reclamation such as the botanical effects of reforesting surface-mined areas, some are investigating other biological effects of the surface-mining process such as wildlife and bacteria—and a few are studying the physical rehabilitation of the cast-overburden areas. Other universities are conducting laboratory studies of the chemistry of acid waters. However, relatively little attention has been paid to the total hydrologic picture as related to surface mining, and Indiana University's research results have shown that this phase of the effect of surface mining on the environment is providing many new answers, some of them startling.

Results of such research have already provided significant contributions to our enjoyment of living, and we have every reason to believe that continued research will enable us to enjoy our environment even more.

Of first importance is the matter of water supply. We can cite several examples of individuals and towns in Indiana that are directly using water supplies, developed by the surface-mining process; and there are many additional towns using river water, which is supplied at low-flow times by ground water contributed naturally from surface-mined areas.

The very important matter of flood control is also involved, for it appears that under certain hydrologic conditions the ridges of cast-overburden material can act as flood-retarding features.

Recreational use of surface-mined areas is a burgeoning thing, as people seek out watery and wooded areas for fishing and deer-hunting and bird-watching. Furthermore, many such areas have already been developed privately into income-producing parks, lakes, and playgrounds that rival other types of park areas in terms of beauty and enjoyability. Moreover, for the person who wants to have a cottage retreat, or one who wants to live permanently with water at his doorstep, reclamation of surface-mined areas for housing developments is already upon us. And the hydrology of surface-mining reclamation is the basis for all of these uses.

Certainly, much additional research needs to be done in all of these areas—by universities, by industry, and by governmental agencies. With the answers thus produced we will be able to understand more fully the total effect of surface mining on the environment, and to design better ways through which the process can and should be regulated.

In the meantime, awareness of our ignorance of the answers to some of the questions, and awareness of the need for acquiring such answers, should provide the incentive for us to enact worthwhile legislation such as that emboided in Senate Bill S. 3132 which the Indiana University Water Resources Research Center recommends subject to the reservaions and modifications suggested above, dealing with Federal versus State regulations, and with the need to reevaluate the regulations every two years on the basis of new knowledge that results from research.

Thank you.

(Subsequent to the hearing the following additional information was received:)

SUPPLEMENTAL STATEMENT OF ALLEN F. AGNEW, DIRECTOR, INDIANA UNIVERSITY WATER RESOURCES RESEARCH CENTER

My earlier statement, relating only to S. 3132, addressed itself to the fact that (1) recently enacted State laws and regulations have made and will coninue to make significant strides in the matter of the restoration of surface-mined lands particularly as they affect coal, and that (2) new research findings are causing us to revise or completely throw out previously held answers dealing with the matter of hydrology as related to the alteration of our environment. Accordingly, I stressed the variability of physical conditions between different States and the differences in methods of mining, and questioned the desirability of a Federal Act; nevertheless, I urged that any act, and regulations promulgated as a result, should be subject to biennial scrutiny and opportunity for revision based on new research knowledge acquired during the preceding two years.

Testimony of several witnesses and questions put by Senator Nelson raised a very critical point, it seems to me, the full significance of which I had been previously unaware. Whereas the testimony at these hearings was addressed to S. 3132 regarding future mining activities, many of the witnesses stated that we are actually in pretty good shape with our current State laws and regulations and with the attitude of the mining companies today. The overriding problem is the orphan area, resulting from past mining efforts, when neither the mining companies nor society at large was aware of the magnitude of the problem of reclamation, and when special circumstances caused us to extract the minerals quickly, as we needed the coal for energy, in the national emergency of World War II. Thus our problem is with our past, not our future.

Accordingly, it seems to me that this problem, is addressed by S. 3126 and S. 217 rather than S. 3132.

Senator Nelson reminded us of the stellar work of the Soil Conservation Service and the Forest Service of the U.S. Department of Agriculture, in reclaiming land subject to erosion, and stressed the fact that S.C.S. experts are available in every county of the Nation, where for many years they have worked actively with individuals and local groups in attempting to solve such problems.

Furthermore, during the course of the hearings I had the opportunity to read the just-issued U.S.D.A. report "Restoring Surface-Mined Land" (Misc. Publ. No. 1082), which is an excellent statement of the problem as seen through the eyes of a Federal agency that has helped remedy problems rather than police those who create them. This, it seems to me, is the difference in philosophy in this particular matter between the two Federal Departments—Interior and Agriculture—as brought out by these three bills.

You will recall that both my original statement on S. 3132 and my discussion at the hearings emphasized the cooperative effort that we have been able to achieve in the Busseron Creek Watershed in Sullivan County, Indiana. The S.C.S., with fine leadership from State Conservationist Ken Grant initially and now Tom Evans, has invested funds and manpower in providing equipment and installations necessary to produce the basic data that are needed, and in discussing with us the ramifications of the mining process on the conservation structures that S.C.S. is building there, as dam construction, mining, and our study, and all three progressing.

Similarly, the Federal Water Pollution Control Administration's Evansville Field Station, with knowledgeable and sympathetic understanding of hydrologic matters through the eyes of Max Noecker, has been most cooperative in providing our project with massive analytical assistance in handling several hundred water samples and making several thousand analytical determinations, and in discussing their application to the problem.

Accordingly, I urge that the Committee consider applying the many talents and huge experience of the Soil Conservation Service to the matter of surface mining reclamation, not from the standpoint of Federal policing now and in the future (because I feel that the States have made it clear that they can handle his part of the matter), but from the standpoint of Federal support of reclamation and conservation efforts. The discussion of the problems of restoring surface-mined land, given in U.S.D.A. Miscellaneous Publication No. 1082, deserves the close scrutiny of your Committee, as it attempts to decide what kind of Federal legislation, if any, is needed at this juncture.

In closing this supplemental statement, I should like to stress again the need for research, to provide the new knowledge that we require. Some representatives of industry mentioned ongoing research within their companies, some State agencies (Minnesota, Colorado) mentioned research being funded by them at universities, and several witnesses stressed that a valid Federal operational area in this matter is by carrying out inhouse research and by funding extramural research. This testimony magnificently reinforces the thrust of my earlier prepared statement—and the plea of James Cox of the Floride Phosphate Council—that we need new knowledge.

If Federal legislation were to be enacted, a major effort should be directed toward carrying out research and demonstration activities within the agencies, and in providing funds for research by other organizations. And, certainly, a periodic review of these research results would be if immeasurable benefit in helping the industry achieve its objective of providing the Nation with its needed mineral resources, while at the same time enabling us to live with the results of our attaining this affluent society, by conserving the beauty of our environment.

Thank you?

Senator METCALF. Unless there is objection at the present time, I am going to pass over the next witness, Mr. Peplow, temporarily and call on Mr. Roger Tippy, assistant conservation director of the Izaak Walton League. Mr. Tippy? Well, we will pass over Mr. Tippy, too.

Mr. Auvil, I thank you, too, for your patience in waiting.

Mr. AUVIL. Thank you, sir.

Senator METCALF. We are glad to have you before the committee.

STATEMENT OF JESSE H. AUVIL, JR., CHIEF GEOLOGIST, GEORGIA DEPARTMENT OF MINES AND MINING, ATLANTA

Mr. AUVIL. Mr. Chairman, my name is Jesse H. Auvil. I am chief geologist of the Georgia Department of Mines, Mining, and Geology. This title carries with it the duties of deputy director of the department and assistant State geologist.

Professionally, I am both a registered mining engineer and certified geologist. I was a member of the Georgia Legislative Study Committee which drafted our strip mining legislation.

The most onerous facet of the legislation under consideration here at the Federal level and the thing that frightens us most is the overwhelming power over the surface mining industry which would be vested in one individual; namely, the Secretary of the Interior.

This bill would take away completely the State's right to administer its own affairs in the area of surface mining. True, the bill says that the States have the initial responsibility, but voids this immediately by gong on to say—only with the approval of the Secretary.

The bill further goes on to say that the Secretary may appoint an advisory committee but does not say shall, nor does it say that the Secretary shall be governed or regulated by such a committee. What has happened to checks and balances for which our Government has long been noted?

We in Georgia have recognized the problem and the need to regulate and control surface mining. We have accepted the responsibility as evidenced by the enactment of legislation which created the mined land use board to control surface mining and the reclamation of mined lands.

This board is empowered to administer and enforce the provisions of the act and all rules, regulations, and orders promulgated thereunder.

But it is difficult to see how this newly created Georgia surface mined land use board can develop acceptable standards for Georgia with such Federal legislation pending. Should the Georgia board develop an adequate State plan which would accomplish the desired results in this field, there is no assurance it would meet requirements as set forth in the proposed Federal bill.

In the light of the legislation to control surface mining passed by the 1968 session of the Georgia General Assembly, we see no need or justification for S. 3132. We feel that the State should have the right—and the time—to work out its own particular problems, problems which are peculiar only to the State of Georgia.

At the very least we feel that those States which have enacted legislation to control and regulate surface mining should be exempted from the act.

Failing this, it is felt it should be spelled out in the Federal act that:

(1) Regional boards of review be made manadatory and that rules and regulations affecting the various regions be presented to the board for approval before being put into effect.

(2) The Secretary of the Interior first convince the regional board that a State plan is not adequate or not being properly enforced before Federal intervention.

(3) Members of the boards be selected from nominations of lists of names submitted by the Governors of the various States within a region and that these lists should include State representatives, operators of surface mines, and persons qualified by experience and affiliations to present the viewpoint of conservationists and other interested groups.

(4) Boards be allowed to elect their own chairman and other officers.

(5) An operator or State have the right to review by the board in the region in which he or it operates and also to appeal to the Federal courts for grievances on assessed penalties.

Thank you very kindly for allowing me time to express these views.

Senator METCALF. Thank you, Mr. Auvil. I am informed that you are a native of Senator Jackson's home State of Washington.

Mr. AUVIL. Yes, sir.

Senator METCALF. And instead of going west, young man, you went east to Georgia.

Mr. AUVIL. I was fortunate enough to marry one of the fair flowers of the State of Georgia. That is how I am down there.

Senator METCALF. My congratulations. Senator Anderson?

Senator ANDERSON. Have you had any experiences in these problems before where you thought the Federal Government hurt you? Is the Federal Government hurting you at all?

Mr. AUVIL. I am very sorry; I don't understand you.

Senator ANDERSON. Well, you are objecting to the bill. What experience has caused you to object to the bill?

Mr. AUVIL. Well, we have in Georgia no experience. Our legislation has just been enacted and actually is not yet in effect and it will not be in effect until January 1, 1969. We hope to have enough time to prove that we can handle this problem within the State.

Senator ANDERSON. Have you had difficulties with the Federal Government before?

Mr. AUVIL. Personally, no.

Senator ANDERSON. Officially?

Mr. AUVIL. Officially, no.

Senator ANDERSON. Then why worry?

Mr. AUVIL. The language of the bill, Senator, worries me. I mean this gives almost complete power to one individual and I am against this in principle.

Senator METCALF. Senator Fannin?

Senator FANNIN. No questions.

Senator METCALF. I believe you have been here during the hearings and I know that you have heard most of the testimony. This suggestion of yours has been made by others, that we have a board of review, and I think every member of this committee for many, many years has been committed to a judicial review and some of us were here when the Administrative Procedure Act was passed to try to get uniformity of review of procedures. I am sure that before any legislation finally is reported there will be appeal procedure provided.

Now, if such a procedure were provided would that alleviate some of your misgivings?

Mr. AUVIL. Yes; it certainly would. The fact that the language of the bill as it is presently written, where a State or an individual or even an operator does not have any right to appeal, bothers me very greatly.

Senator METCALF. I know that all of us are concerned about this delegation of too much power to any individual and as I facetiously mentioned a few minutes ago, many people seem to fear that we are going to have a change of administration and a new secretary that they may distrust. We have had Secretaries of the Interior who have abused some of their powers. I am pleased for you to raise this question and I congratulate Georgia for passing new legislation and moving forward as a State in this area of reclamation.

Mr. AUVIL. Thank you, sir.

Senator METCALF. Thank you.

Senator Fannin, do you want to introduce the next witness?

Senator FANNIN. Thank you very much. I am very pleased to introduce Mr. Edwart Peplow of Arizona, executive secretary of the Arizona Mining Association, a gentleman of wide experience in mining, highly respected in our State of Arizona, whose counsel is solicited generally throughout the mining industry.

I believe he will express the concern of Arizona's mining industry about the impact of this proposed legislation.

I think I express our general concern that legislation, such as the matter before us, centralizes too much power in a department of the Federal Government to the possible detriment of the mining industry. We must be competitive with the other nations of the world and maintain a domestic mining industry that can provide our needs without having to depend on imports dependent on imports.

We should realize that the mining industry often processes low-grade ore on marginal production. We cannot place economic barriers upon them that would inhibit competition. I am very pleased to have Mr. Peplow here with us this morning, Mr. Chairman and Senator

Anderson, and I would like him to come forward and give his testimony.

Senator METCALF. Mr. Peplow, with that accolade we are delighted to have you before the committee and are looking forward to your testimony.

STATEMENT OF EDWARD H. PEPLOW, JR., EXECUTIVE SECRETARY, ARIZONA MINING ASSOCIATION

Mr. PEPLOW. Mr. Chairman, Senator Fannin, I am embarrassed, I hope I can live up to the advance billing. I am, as you know, Mr. Chairman, the executive secretary of the Arizona Mining Association.

I would like to interject here in my prepared statement that we endorse the constructive suggestions that have been made by such people as Joe Abnor from the American Mining Congress, Mr. Moody of the National Coal Policy Conference, Mr. Johnson, and yesterday we had some excellent testimony from Don Emigh and the Phosphate Lands Conference and so on.

I hope that my testimony this morning will not only support these statements, but will amplify them and refocus them.

The Arizona Mining Association, sir, is composed of 12 member companies and, as Senator Fannin has just told you, the annual production of copper within the State of Arizona which is achieved by these companies exceeds that of all the other 49 States put together.

I appear here today in behalf of this association and in opposition to Senate bill 3132 and similar legislation.

Our opposition is based on three general considerations:

(1) Our abiding faith in the free enterprise system on which so much of this country's greatness has been built;

(2) A deep concern for the continued industrial strength of the United States, without which our military competency would disappear; and

(3) A pragmatic and realistic conviction that passage of such legislation as Senate bill 3132 would not only fail to accomplish the objectives its proponents say it is designed to accomplish but that it very quickly, directly and effectively would deliver such a quietus to the mining industry that the United States as a whole would suffer immeasurably.

First, may I assure you that the member companies of the Arizona Mining Association, their executives, and I myself share the widespread concern over the preservation of natural beauty, the ecological amenities, expanding recreational resources, the prevention of the extinction of various species of flora and fauna, and the restoration to usefulness of any land anywhere damaged by any activity.

Yet as good Americans I think we must all be similarly concerned with the establishment and preservation of certain comparative national values. This is the greatest culture the world has ever begotten. It is a metals-based culture.

Every facet of our national life is dependent upon a continuing adequate supply of metals and minerals, and every thinking man must realize that, in today's volatile international world of tensions, we must achieve and maintain as close to a self-sufficient domestic minerals industry on the mainland of the United States as is humanly possible to attain.

For many obvious economic and military reasons we cannot afford to count on foreign sources to fill our needs.

In this context, then, it is obvious that very high in the list of our national values must be included the encouragement of a continuing healthy minerals industry. This becomes even more important in the light of the best predictions of national needs in the immediate future.

The most conservative estimates we have seen of the future needs for copper, for instance, indicate that the United States—simply to continue to maintain its present standards—will have to be producing within less than 32 years four times as much newly mined copper as it is producing today.

This tremendous increase may be met, in part at least, by production from such now exotic sources as mining the Continental Shelf, by the use of nuclear energy to glean presently unrecoverable metals from presently unmineable deposits, perhaps even by mining the Moon or Mars.

But the lessons of history demonstrate clearly that the one dependable means of meeting constantly increasing demands is the improvement of technology to allow us to mine today what just yesterday was considered waste rock.

Older mines today are producing from areas which had to be left untouched yesterday, and new developments are opening up deposits of such low grade that they were passed over with scarcely a second glance up to now.

For example, in Arizona today there are two major copper properties under development which will mine rock containing less than seven-tenths of 1 percent copper. Not many years ago, as I am sure you are aware, 6 percent was the cutoff point, the minimum grade that could be mined economically.

At one of these, the Anaconda Company's Twin Buttes property, development costs will run well over $75 million; at the other, the Duval Corporation's Sierrita property, the development costs will be about $150 million.

These two properties lie within easy sight of each other, about 3 miles apart. Yet the conditions and problems faced by the two companies are so essentially different they might as well be on different continents.

The Duval ore is easily leachable for the recovery of copper; Anaconda's ore has entirely different characteristics. The Duval body has a significant molybdenum content; Anaconda's has much less. Anaconda is removing some 230 million tons of alluvial overburden to get down to its ore, and from this valley fill it is building earthen dikes behind which to impound its tailings; the Duval ore is overburdened not with alluvium but with hard rock.

Anaconda is making remarkable progress in a very expensive program of planting these dikes with grasses, trees, and shrubs, despite serious problems of soil sterility and so on.

But not even nature has devised means of growing anything but mosses and lichen on hard rock. And not even that in the semiarid desert of Arizona.

I cite this example as prime evidence of the virtual impossibility of writing a workable code to regulate the surface mining operations of these two properties alone and the reclamation of their surface mined areas.

Obviously the task of preparing such a code to cover all of the mining operations in Arizona—including everything from the giant Morenci Mine to each sand and gravel pit or flagstone quarry—is fraught with such complexities as to make it unworkable.

Multiply these problems by 50 for the 50 States and you have utter chaos. I hasten to recognize, of course, that Senate bill 3132 states in section 3, subsection (d) that the diversity of conditions in the various mining areas makes the establishment of uniform regulations on a nationwide basis infeasible.

Yet the bill does indeed, in all of its provisions, vest the Secretary of the Interior with the power to require, approve, and oversee the administration of State plans which meet criteria he establishes.

I submit, gentlemen, that this could and probably would be tantamount to investing the Department of the Interior with the authority to establish and enforce a uniform, or very nearly uniform, plan on a nationwide basis. No individual secretary and no single department of the Federal Government possibly could be sufficiently knowledgeable about the many intricate and often subtle problems involved in the successful operation of every individual mine in any given State to promulgate and enforce workable rules and regulations.

This is, in our view, a matter which does not now need in Arizona, legislative control. Certainly not in Arizona nor in any other nonferrous metals mining area have there been any significant problems of land reclamation.

In those areas where any additional legislative control might be indicated, and I am not at all sure there are any such, in view of the testimony I have heard here, we feel it is patently a matter which can be dealt with successfully only at the most local feasible governmental level.

Even a State code would have to delegate insofar as possible the authority to deal with individual situations to the county or even the city levels. Only the people most intimately involved can make responsible judgments concerning comparative values; only they can know fully how many jobs are involved, what ecological values will be affected, what environmental ammenities are actually at stake, and what effect certain proposed regulations will have on the operations of a specific property.

And, gentlemen, we point out and urge your most serious consideration of the fact that a large percentage of the mining operations in this country today are marginal or nearly so. It has been for many years a race between constantly rising costs and lowering ore grades on the one hand and technological advances on the other hand.

Only virtual miracles of technology have enabled us to continue to extend the life of properties which already have faced a number of times the likelihood of being shut down permanently.

We point out further two facts: One, that the preplanning of the detailed operations of a given hard rock, open pit mine over the period of even a year is at best a flexible, changeable thing.

Unpredictable facts of geology, economics, personnel, technology, and so on force every company I know of to be extremely versatile and adaptable in meeting the exigencies of the moment.

From a purely practical point of view, therefore, the conception of such a detailed conservation and reclamation plan spanning the

entire predictable life of a given property as would be required by Senate bill 3132 would be in large part infeasible and futile.

Second, we point out that open pit copper mining today is a mass production operation involving the handling of staggering tonnages of material with the utmost of efficiency. After years of diligent study the decision to undertake the development of a new property or the expansion or extension of an old property often hangs on the smallest of cost factors.

The imposition of unrealistic requirements for preplanned programs of reclamation of surface mined areas very easily could discourage management from recommending the needed investment of stockholders' money.

Please do not draw from what I am saying, however, the inference that the mining industry in general, or the Arizona copper mining industry for which I speak specifically, is unmindful of the need for the preservation of natural beauty, watersheds, and the many other values we are considering here today.

We have already demonstrated on a voluntary basis our abiding interest in such values. For example, the Anaconda Co.'s Twin Buttes operation was named the Arizona Conservation Organization of the Year 1966 by the National Wildlife Federation, the Arizona Game Protective Association, and the Sears Roebuck Foundation. This award was made in recognition of the company's extensive, expensive, and purely voluntary program to preserve as many of the environmental ammenities as possible.

I feel entirely justified in saying that today the mining industry across-the-board is fully aware of the need to preserve insofar as it possibly can the environmental values of this Nation. It is already accepting its share of the responsibility to do so. But it is at the same time very actively conscious of other obligations:

The obligation of mine management to earn for the owners of the company, the stockholders across the country, a fair return on investment, or lacking reasonable expectation of such, to reject expansion plans;

The obligation to produce for the United States a reliable and adequate supply of the metals and minerals which are absolutely indispensable for the industrial and military welfare of the country;

The obligation to meet these demands in future as in the past by way of the free enterprise system of economic development;

And the obligation to point out to you, the members of this important committee, what we are convinced would be the inevitably extremely harmful effects upon this vastly important industry of such legislation as Senate bill 3132.

I would like to interject here, sir, a note which does not appear in the typed version of my testimony that you have before you.

It has to do with another reason we feel that such legislation would be ill advised. The proposed permit system would seriously discourage exploration for such minerals as copper. Today a company spends hundreds of thousands of dollars in the long and complex process of exploring a body of metal-bearing rock to determine the size, shape, grade, and other characteristics before a decision can be made whether the body is minable.

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Mr. Power, of the Phosphate Lands Conference, described this exploration process extremely well, as you will recall, yesterday. Ours is a very similar problem. This is at best a gamble. You have to risk important amounts of capital in order to find the body which will produce the Nation's vital metals, but the odds are strongly against it and management must constantly be conscious of the need to justify such gambles to stockholders.

The addition of another element of uncertainty, the requirement that a permit be issued to allow the development of the rare property which is deemed minable, could easily discourage the development of exploration which otherwise might be productive.

This I feel is an important reason for considering such legislation as ill advised.

We, therefore, respectfully submit, in the light of this testimony, that such legislation is unworkable, unnecessary, and very ill advised.

Thank you.

Senator METCALF. Thank you, Mr. Peplow. Senator Fannin?

Senator FANNIN. Mr Peplow, I think the committee would be interested in hearing how Arizona has handled the problem of slag produced as a result of mining.

Mr. PEPLOW. Yes, sir. At Miami, for instance, there is an area of 500 acres, a 500-acre tailing pond, which was abandoned in 1959. The company, at great expense, has gone in and planted and it is now, oh, similar to a beautiful mountain park. Once a tailings area has been abandoned it can be planted and we have been for 8 or 9 years, as an industry, very actively researching the problems involved in getting vegetation to grow on such areas.

It is a new field of technology. One company in the State that I know of offhand has a full-time agronomist on its staff, a highly paid man, who is researching the problems involved in establishing vegetation on ground-up rock.

There is an active interchange of information among—I am sure you are aware of this, sir—the various States. We have just recently, for instance, had people from Colorado, members of the Colorado Open Space Foundation, in Arizona. We have shown them what we are doing. We have shown them everything from our successes to our utter failures in an effort to learn from them what we might do better. I think that the industry has demonstrated and is continuing to demonstrate its active interest in this field.

My concern, Senator Fannin, is if we had to write a bill in Arizona to control surface mining what could we say?

Senator FANNIN. I realize the problems and they are vast. For instance, the problem of stream contamination is the most obvious.

I know in our State it happens that the Salt River Water Users Association and the mining industry have not only cooperated to coordinate their efforts and avert stream contamination, but to provide for good water supplies to communities and to industries that, certainly, is a significant example of sound conservation by the mining companies in our State.

Mr. PEPLOW. In support of what you say, Senator, the mining industry has built, for the Salt River project, three dams, the most recent

being the Blue Ridge Reservoir, a beautiful reservoir created in a water exchange.

This is common practice which has extended over the years. The Roosevelt Dam was the first major project under the Reclamation Act of 1940. The reason it could be built and projected as a paying proposition was the existence of the mines which would use the power it generated. I would point out further, sir, that the mining industry of Arizona reclaims and reuses 8 out of 10 gallons of water.

Now, I would like to say the reason we do this is we are such good citizens. Actually, sir, it is that we are very selfish. It costs us about a third as much, I think, to reuse water as it does to generate new water, so we are actively conservation minded.

Senator FANNIN. I know too that the Salt River project entered into a beautification program working with the communities, with the counties, and the State. It is something that is very much needed and I hope will be continued.

Mr. PEPLOW. Yes, sir; we do.

Senator FANNIN. That is all, Mr. Chairman.

Senator METCALF. Thank you, Mr. Peplow. I can recall that when I was growing up the Anaconda Co. polluted the streams in and around the copper mines of Butte, reaching out about 35 miles, clear down to the confluence of the Clarks Fork River. Then someone came along and, as you recall that story, found out that the tin cans thrown in the river came out coated with copper and they decided that they would recover all that effluent that went into the river. I read the other day in the paper that a boy caught an 8-pound trout in the city of Anaconda. But the Anaconda Co. also, as a result of their efforts which are very admirable, has made a profit out of recovering some of that copper.

The same was true, of course, of the spoil. When I was growing up in Montana you couldn't grow a flower or blade of grass in Butte, Mont. Now, after recovery processes, it has become one of the garden cities of the State. The Anaconda Co. is now in the fertilizer business and one of its largest producers and making a profit out of the recovery that they have. This business of reclamation and restoration isn't always an added cost. Sometimes it comes back in dividends as well as in an esthetic appreciation. I know that many of the problems of reclamation have been cured and voluntary efforts are, of course, commendable. I join with my friend from Arizona in appreciating your testimony.

Mr. PEPLOW. Thank you very much, sir. Thank you, Senator.

Senator METCALF. The next witness is Mr. William Waugaman, who is director of the Alaska Miners Association and a State senator from Alaska. Mr. Waugaman, Senator Gruening, our colleague, is the chairman of the Subcommittee on Minerals, Materials, and Fuels of this committee and he had to be out of town. He regrets very much not being able to greet you and listen to your testimony. He is interested and concerned and he informed me that he is a long-time friend of yours. He did want to present you to the committee, so on his behalf and on our behalf we welcome you to the committee.

STATEMENT OF HON. WILLIAM WAUGAMAN, DIRECTOR, ALASKA MINERS ASSOCIATION

Mr. WAUGAMAN. Thank you, sir. Mr. Chairman, my name is William Waugaman, a director of the Alaska Miners Association, the chairman of the Surface Mining Committee, also manager of the Usibelli Mining Co., Fairbanks.

I appear before you today to testify in opposition to Senate bill 3132. My testimony here has been not written by myself. It was written by the directors of the Alaska Miners Association. However, I certainly agree with it wholeheartedly.

The Alaska Miners Association is adamantly opposed to Federal control of the mining industry regardless of the names and terminology used. This bill, S. 3132, while it claims to vest the regulation of surface mining in the various States, is a thinly veiled reach for Federal control of all surface mines on the flimsy excuse that the materials so mined are commerce.

This law will completely destroy our present system of private ownership along with the free enjoyment and use of private lands by individuals. The mere ownership and mining are made black villians and made to appear against the public interest even though section 3(a) states to the contrary.

In our State, which contains 365,481,600 acres of land and 9,814,000 acres of inland water, approximately 12,300 acres of land have been disturbed by placer, strip, or open-pit mining.

In addition to producing more than $1½ billion worth of mineral wealth, this "disturbed" land was transformed from unoccuplied unusable desolate muskeg, tundra, and swamp-permafrost areas into well drained, usable, and productive ground.

For example, prime building ground around our major cities is ground that has been used for mining. At Nome, the airport, FAA buildings and Beltz Vocational School are all located on worked-out placer ground because it is ideally suited for the erection of permanent community improvements. Many Government buildings placed on the surrounding permafrost have been damaged beyond repair by frost heaving and melting of the permafrost.

Near Fairbanks the satellite tracking station is built in a valley on worked-out placer ground because reliable foundations were needed.

At Juneau, our State capital, most of the city is built on mine tailings. All of our roads and airfields are built from tailings or open gravel pits. I could go on and on with examples.

We have adequate laws in our State for the regulation of surface mining and our industry cannot stand the added weight of the dead hand of the Federal Government enforcement.

Mineral exploration is increasing in our State. Technology and better methods are just now making it worthwhile for production companies to extensively explore our State in the hope of establishing new mines which will add to our national wealth.

Mining unlike government must be able to show a profit. Mineral commodities are competitive on a worldwide basis. I would like to call your attention to the statements of Senator Gruening in the Congressional Record of March 22, 1968, in which it is pointed out

that the United States is acquiring an unhealthy dependence on foreign sources of minerals.

Equally alarming is the article in the April issue of the Engineering and Mining Journal that Japan is turning to Siberia for mineral sources. If our industry is to compete on the world market and American capital is to bring gold and dollar flow into the United States we must produce on a competitive world market.

While we agree that some regulation may be necessary in some portions of the United States at some future time, in Alaska perhaps, the additional costs both to industry and Government which would be occasioned by this bill will most likely be of sufficient magnitude to adversely effect the mineral development of Alaska.

There has developed a strange dicotomy in the Department of the Interior's attitude toward mineral resource development. We urge you to consider our Nation's well-being foremost. If the U.S.S.R. succeeds in developing Siberia while we fail to develop Alaska, Japan will swing into the Communist orbit and our tremendous investment in the redevelopment of the Japanese nation will become a community prize.

Mr. Chairman, Alaska is vastly different from the other 49 States. It is the only State in the Union that is within the Arctic Circle and the subarctic regions. We have an area the size of Texas that is permanently frozen through our underlay of permafrost. All our major drainages are glacier fed and are already contaminated according to the Department of the Interior with sediments.

We have had a little experience with the Water Pollution Act as far as the Department of the Interior is concerned. We have a water pollution law in our State. We think it is a good one. We think it fits Alaska. We think we know more about Alaska than the Department of the Interior, strange as it may seem, but yet the Department of the Interior has chosen to deny us this right to regulate our own water based on the excuse that they contend that stirring the gravel in a stream is pollution.

Now, in an area the size of Alaska, as I said before, one-fifth the size of the United States, our main river drainages are all glacier fed. They carry many thousand times more sediments every day than we could possibly put in those rivers by any mining operations.

We are afraid that if such a bill as this becomes law it will be an added detriment to the development of our State. Our mining commerce it appears as though will be derived from the other countries in the Pacific Basin.

To add $1 a ton to any of our ore is liable to kill our goose that laid the golden egg, and I appreciate the opportunity of being able to testify before you today.

Thank you very much.

Senator METCALF. Mr. Waugaman, thank you very much for your testimony. Senator Fannin?

Senator FANNIN. Thank you, Mr. Chairman. Senator Waugaman, I had the privilege of being in your State a short time ago and listening to some of the people testify on another matter. They brought out the great amount of exploration that is going forward in Alaska. From your testimony I gather you feel that the legislation now before us would deter that new development.

I was trying to think of the percentage of land in Alaska under Federal ownership. Is it about 95 percent?

Mr. WAUGAMAN. Ninety-five percent of our land is still under the Federal Government. We were allowed 103 million acres under the Statehood Act. However, we have a land freeze on and it has been on for the last year.

Senator FANNIN. Your selection program has been stopped at the present time?

Mr. WAUGAMAN. Yes, sir.

Senator FANNIN. I know that you still are in the process of making a selection. Do you feel that there will be extensive mining in that area?

Mr. WAUGAMAN. Oh, yes, sir.

Senator FANNIN. And this would not then be under the Department of the Interior if that occurs?

Mr. WAUGAMAN. We certainly hope we can get out from under the Department of the Interior but I doubt it very much. Actually, on the other hand, too, Senator, our regulations in Alaska and our mining laws in Alaska are very close to the regulations that have been promulgated by the Department of the Interior for the Federal lands.

Senator FANNIN. I think we all realize the tremendous need for a good Federal-State cooperation in these programs. From your testimony and that of others, I gather they are very desirous of having this type of cooperation and what you are concerned about now is the amount of power this proposed legislation would give to the Secretary.

Mr. WAUGAMAN. That is correct, sir.

Senator Fannin. I commend you for your statement. We are very desirous of having a supply of ore and all types of ore available at all times, not only from the standpoint of the economy of our country, but from the standpoint of our Nation's defense. That is what you are thinking about when you refer to development going forward?

Mr. WAUGAMAN. That is certainly correct.

Senator FANNIN. Thank you very much.

Senator METCALF. I thank you. I want to thank you, too, Senator, for your statement. I heard Senator Bartlett yesterday tell the Northwest Rivers and Harbors Conference people who are meeting here and developing a water resource development program for our Northwestern States—and we feel that Alaska is a companion State—that some States are underdeveloped and some regions are underdeveloped, but Alaska is undeveloped.

I am reminded of a story about Justice Holmes. He was sitting on the bench of the U.S. Supreme Court and one of the counsels misquoted that frequently used statement attributed to Justice Marshall that the power to tax is the power to destroy. Justice Holmes stopped the lawyer and said, "Not while this court is sitting."

And I want to admonish you that as long as Senator Bartlett and Senator Gruening are sitting around here, I know how much money they have obtained for Alaska and I don't think that you need to fear the dead hand of the Federal Government.

Thank you very much.

Mr. WAUGAMAN. Thank you. Thank you, sir.

Senator METCALF. Senator Bartlett has forwarded a letter to the committee from the president of the Alaska Miners Association. Without objection, it will be printed at this point in the hearing record.

(The letter referred to follows:)

ALASKA MINERS ASSOCIATION,
Anchorage, Alaska, April 3, 1968.

Hon. E. L. BARTLETT,
Senate Office Building, Washington, D.C.

DEAR SENATOR BARTLETT: Senate bill 3132 has been introduced in Congress at the request of the Department of Interior. This proposed legislation provides very stringent control over all surface mining. The Alaska Miners Association is concerned about this legislation in that it does not take into consideration Alaska's unique problem—huge areas of swamp land covering perma-frost and silt.

As you may know, only 12,300 acres of land in Alaska has been disturbed by placer, strip and open-pit mining. In addition to producing more than 1½ billion dollars worth of mineral wealth, this "disturbed" land was transformed from muskeg to well-drained sand and gravel areas. At Nome, the airport, FAA buildings, and Beltz Vocational School are all located on worked-out placer ground as it is ideally suited for the erection of permanent improvements. Near Fairbanks the satellite tracking station is built in a valley on worked-out placer ground because reliable foundations were needed.

The streams that drain the muskeg areas prevalent in most of Interior Alaska frequently are naturally polluted by organic material and by intermittent flooding and caving of silt banks. Placer mine tailings filter and aerate streams that flow through them.

Underground water is obtainable from wells in valleys that were formerly frozen and incapable of producing water.

A new growth of alder and aspen replaces the virgin cover of muskeg and black spruce.

The Museums and Universities of the world have been enriched with the fossil remains of animals recovered from the frozen mucks.

We urge you to oppose S. 3132. Best personal regards.

Sincerely,

LEO MARK ANTHONY.

Senator METCALF. Did Roger Tippy come in? Mr. Tippy, you are the witness that we have been waiting for.

Mr. TIPPY. My apologies, sir.

Senator METCALF. No; I believe that unless there are some other witnesses—and if there are any other witnesses that are on the list and haven't filed their statements, and so forth, please identify yourself to Mr. French—on my list Mr. Tippy, you are the last witness. We are especially pleased to come to the end of the long list. Thank you very much.

STATEMENT OF ROGER TIPPY, ASSISTANT CONSERVATION DIRECTOR, IZAAK WALTON LEAGUE

Mr. TIPPY. Mr. Chairman, I am Roger Tippy, assistant conservation director of the Izaak Walton League of America, a national organization of persons interested in conservation and outdoor recreation. I thank you for this opportunity to present our views on the relationship of surface mining to environmental quality and I can summarize this rather briefly since so many words have been spoken on both sides of the issue already.

Senator METCALF. You have waited so long and so patiently we feel you are entitled to use as much time as you want.

Mr. TIPPY. We principally feel this is a serious problem today because of contour strip mining for coal. Some of our members in other

regions, such as the Florida people near the phosphate deposits, potentially the Colorado and Utah residents around where the oil shale may be mined if the retort system is used to refine it, are also worried about the surface-mining impact on fish, on wildlife, on the natural beauty of the countryside, but while, although for these reasons we would support a general bill, we feel that the primary focus of any national legislation should be on coal mining as was suggested to the exclusion of other forms of mining in S. 217.

As I said, contour stripping is considered a more serious problem than area stripping in flatter terrain. Our membership feels that in certain types of terrain contour stripping simply should not be allowed the way it is presently practiced.

It is fruitless and futile to talk about reclamation. The Kentucky law forbids contour stripping on any grade more than 28 degrees in steepness. We feel such regulation by the appropriate authority may be necessary.

Another point we wish to make is that we think State actions in West Virginia, Kentucky, and Pennsylvania may be sufficient to deal with this contour stripping problem. New and strong laws are all fairly recent, and the time to see whether they are going to be sufficient without further public action has not yet passed.

Since West Virginia enacted its law, which our West Virginia division feels to be the strongest coal mining control law in the Nation, not even a single growing season has passed and it does take time to see how laws work as well as to see how methods such as reseeding by airplanes would work.

Briefly analyzing the legislation then, we state that, if congressional action were necessary, not to supplant these good State laws in the name of uniformity but to prod the other States who are ignoring problems caused by surface mining at the present time. We think S. 3132 presents a more workable approach, that is, rather than laying down standards nationwide in the Federal Register as the other bills provide, the administration bill suggests that each State submit a control plan which is tailored to its topography, its own mineral deposits, and so forth, and departmental review would be based on this ad hoc sort of circumstance.

We would like to see the Agriculture Department involved, particularly in the Appalachian region, where we do think reclamation of orphan lands should be seriously considered as a national responsibility.

The profits were taken out of Appalachia sometime many years ago to enhance the general economy and the taxpayers of the entire Nation could make some kind of contribution to reclamation of orphan lands in the Appalachian regions.

Here we think the Soil Conservation Service and the Forest Service are organized in counties and on every State level, have years of experience, know the vegetation and the topography as well as anyone in this entire region does, and we feel they should have an active role in reclamation.

I believe I can let my summary rest at that point.

Senator METCALF. You have also a statement from Mr. Grover C. Little. You wish to file that for the record?

Mr. TIPPY. Yes; both statements stand as the Izaak Walton League's statement.

Senator METCALF. I see. They will be incorporated in the record immediately after your statement. Senator Fannin.

Senator FANNIN. Mr. Tippy, I agree that we certainly do have some problems and I think that most of the States are vitally interested in conservation. The people are making demands now at the State level that I think are assisting greatly in bringing about correction of some of the problems we have had in the past.

Water is a scarce commodity in many areas and an extremely scarce commodity in the West. I was wondering, when you mentioned this Colorado oil shale, just what you had in mind.

Mr. TIPPY. According to the information I have been able to read on the subject, Senator Fannin, if the shale is mined off the surface in conventional methods and extracted through the application of heat only a few gallons of oil are produced per ton of rock and the rest must of course be dumped somewhere around the refining site.

Certain persons have proposed that something like Operation Gasbuggy be experimentally tested in the oil shale lands to see if the in situ process could liquify the oil beneath the surface of the earth and not create this problem of disposal of spent rock.

Senator FANNIN. I know that experiments are going forward in that direction. I agree with you that we should do everything within our power not only in the oil shale industry but in all industries to see what can be done without disturbing the areas.

In your testimony you stated you do not favor national standards and that they could cause some serious dislocations in some of the areas of the country. Have you been out in the oil shale area of Colorado?

Mr. TIPPY. Senator, I grew up in Arizona and have vacationed in Colorado a number of times.

Senator FANNIN. The possible problems inherent in overburden are yet speculative. I think we should certainly take every precaution but we still do not have a proven economic process for obtaining the oil from the shale, so I think that your thoughts are good from the standpoint of trying to utilize our modern devices, our nuclear energy and all to process, but we still have the problem of economics at all times to consider. You know how difficult it would be to continue our copper mining in Arizona if this proposed legislation were passed. It would just be impractical and economically impossible to carry through.

Mr. TIPPY. I really don't know who, Senator, is suggesting that all open pit copper mines be filled.

Senator METCALF. We use the oil shale residue to fill those big pits.

Senator FANNIN. We need a cooperative program to do that. I think you probably have been down in the Bisbee area and have seen some of the open pit mines there and the wonders of that area. Whether or not mother nature produced them or they were produced by man, they are still beautiful sites to me.

Thank you very much.

Senator METCALF. I want to thank you, Mr. Tippy. I have been impressed as these hearings were going along that, while this legislation is prospective in character, and the Secretary made a strong point that it was prospective, although some of the witnesses suggested that perhaps it had to be strengthened, many witnesses have pointed out what

I know from my own experience in Montana, that we are doing something.

Industry and the States are taking care of some of this surface mining pollution at the present time and the greatest evil is the so-called orphan lands that have been abused, exploited, and abandoned in the past.

The gold dredges have been up and down the streams of Montana and there are still scars there after many years, whereas new mining operations have been reforested or reclaimed and smoothed off. I think it has been helpful, during the course of this testimony, to have statements such as yours point out the special needs in various areas. I agree with Senator Fannin we are moving into new developments in oil shale, perhaps significant production there, and at least there we have an opportunity to do what we did in the coal lands of Appalachia. A little planning at the State level and some research and consideration will prevent the destruction of the environment as was done in some cases in the past.

Thank you very much, Mr. Tippy.

Mr. TIPPY. Thank you.

(The statements referred to follow:)

STATEMENT OF ROGER TIPPY, REPRESENTING THE IZAAK WALTON LEAGUE OF AMERICA

Mr. Chairman: I am Roger Tippy, Assistant Conservation Director of the Izaak Walton League of America, a national organization of persons interested in conservation and outdoor recreation. I thank you for this opportunity to present our views on the relationship of surface mining to environmental quality.

Briefly, we believe surface mining practices must be regulated by governmental authority in order to prevent serious damage to the environment. We recognize that the seriousness of the problem varies widely from one region to another, from one mineral to another; even within the coal industry we find area stripping involves far fewer problems than contour stripping. This does not mean contour stripping on the Appalachian ridges is the only serious surface mining problem today. Florida phosphates, Maine zinc and copper, and Colorado oil shale, are just a few of the other mineral deposits which are creating or may create severe disruptions of the natural environment. We therefore respectfully submit that all surface mining activities should be covered by any Congressional legislation on this subject.

APPLICATION OF NATIONAL STANDARDS

Nationwide standards governing surface mining practices would, under certain conditions, be desirable. National standards would keep the mining industry competitive in states which have already moved to control the abuses of surface mining, and states now lacking effective controls would be encouraged to provide them. However, if federal standards are not going to require as much control as the most effective state laws now in existence, we do not favor national legislation. The single most serious surface mining problem—contour strip mining for coal—is now under fairly effective regulation in the states where it is most widely practiced. Weaker federal standards would bring strong pressure to relax these existing state laws and regulations.

The administration bill, S. 3132, is the only bill which does not propose publicly announced federal standards before a state response is required. This provides the flexibility needed for surface mining regulations: each state's plan can be evaluated in terms of its particular topography and mineral resources. On the other hand, many states whose experience with surface mining problems may be meager would probably prefer some form of advice as to what sort of regulatory scheme would be acceptable. Section 7(a) of S. 3132 sets out a few general indications of acceptability; these principles are not an adequate statement of all the general principles any regulatory scheme should include. We suggest specifically that they should further include recognition:

(1) that certain types of terrain should not be mined at all due to the ineffectiveness of reclamation attempts;
(2) that important natural areas and esthetic values should be protected by prohibition of surface mining;
(3) that the state agency enforcing water pollution laws should have a voice in granting permits to activities which could result in acid or sediment pollution;
(4) that permits be required for prospecting activities;
(5) that reclamation be preplanned and integrated into the mining cycle; and
(6) that penalties be stringent enough to assure compliance.

S. 217 and S. 3126 propose federal standards, for coal mining and for all surface mining respectively, which would apply in every state until a state submitted equivalent or stronger standards. This formula would create a greater risk of weakening the effective state laws now in effect; it would also put surface mining controls in many states where they would be rather irrelevant. We know of no contour strip coal mining in Rhode Island, for example. These two bills do set out superior guidelines for effective state programs. Control programs should include preplanning or reclamation and integration of reclamation into the mining cycle and prohibition of strip mining where reclamation is infeasible. If the regulatory requirements of these bills were stated in sec. 7 of the administration bill, the committee would have the best elements of the several bills before it. The criteria in S. 217 and S. 3126 should include additional provisions to protect asthetic values and water quality.

ADMINISTRATIVE RESPONSIBILITY

The three bills have different suggestions as to who should administer a federal surface mining program. S. 3132 provides simply that the Secretary of the Interior should have the authority created by the act. Routine administration, would presumably be handled by the Bureau of Mines.

We question the propriety of asking an agency which promotes the prosperity of an industry to become a regulatory agency for that industry. S. 217 is sounder in that it directs the Secretary of the Interior to appoint an officer to administer the programs authorized by the bill. This would apparently create a separate bureau for surface mining under the Secretary.

We find much merit in Senator Nelson's suggestion that the Department of Agriculture should share with Interior the Administration of a federal program. Several agencies under the Secretary of Agriculture are especially qualified to work with landowners in the eastern United States. The Soil Conservation Service and the Forest Service, for example, have many employees in Appalachia who know the soils and vegetation of that region as well as anyone does.

The objection will doubtless be heard that to give two Secretaries joint responsibility for certain activities, as Title I of S. 3132 provides, goes against the principles of efficient public administration. The committee may wish to consider combining the approaches of S. 217 and S. 3132 in an innovative way—directing the Secretaries of Agriculture and the Interior to jointly appoint an officer to administer the authorized programs. An interdepartmental agency could be created to conduct the regulatory program in Title I: the established resources management agencies could operate the rehabilitation programs while the new interdepartmental agency coordinated these activities. This would be a novel arrangement. But surface mining, like many other current conservation problems, does not fit neatly into an institutional structure designed fifty years ago.

ADVISORY COMMITTEES

The Izaak Walton League favors the advisory committee approach of the administration bill. This is the only bill which specifies that persons qualified to present the viewpoint of conservation and other interested groups should sit on these committees. S. 3126 has the defect of requiring that exactly fifty percent of the National Advisory Committee's membership shall be qualified by experience or affiliation to represent the viewpoint of persons or operators of surface or strip miners. If the qualifications of just one member of this committee were challenged, the committee would run the risk of being found illegally constituted.

REHABILITATION OF PREVIOUSLY MINED LANDS

The "orphan lands" which were stripped in the past and now lie neglected are a more serious unmet problem today than the regulation of current mining activities. The 700,000 acres left derelict after contour strip coal mining opera-

tions continue to damage water, farm land and wildlife habitat long after the miners have left.

We have been disappointed to note that at some time between publication of the 1967 report, Surface Mining and Our Environment, and the drafting of the bill which was introduced as S. 3132, the Department of the Interior forgot about the need for a rehabilitation program. Under these circumstances, we favor Senator Nelson's proposal that the Department of Agriculture be given a major role in the reclamation effort. Title IV of S. 3126 has the additional merits of dealing with state governments and developing project plans, each to cover a number of landholdings. This procedure is preferable to direct arrangements between the federal government and individual landowners.

S. 217 contains several worthwhile provisions which should be incorporated in the legislation. Section 404(b), providing for public access, section 405, governing rights to remine lands which have been reclaimed, and Section 502(e), providing for revenue sharing with counties are all sections which we support.

My remarks are followed by a statement of Mr. Grover C. Little, Jr., of Kenova, West Virgina. Mr. Little is the Executive Director of the West Virgina Division of the Izaak League and has devoted much of his time and energy over the past several years to the goal of securing effective regulation of strip mining in his and neighboring states. He serves as chairman of the League's national Subcommittee on Mining and is generally considered our most knowledgeable member on strip mining problems.

STATEMENT OF GROVER C. LITTLE, JR., EXECUTIVE DIRECTOR, WEST VIRGINIA DIVISION OF THE IZAAK WALTON LEAGUE OF AMERICA

Very briefly the Izaak Walton League of America is a citizen organization concerned with the conservation and wise use and management of the Nation's natural resources for the benefit of all the people, today and throughout the future. We appreciate the privilege of appearing before you.

In some ways we feel that we are qualified to be of some benefit to this Committee for many of our members know first-hand something about the damaging effects of surface mining. For several years our chapters and members have been observing and studying the magnitude of problems involved in the stripping for coal and other forms of surface mining. We have seen and read some things which pleased us but at the same time we have observed operations and received reports which were shocking—shocking because of the lack of concern by some surface mine operators for human beings themselves and for the total disregard displayed for other natural resources that were sacrificed to extract one particular mineral.

We have come here today to give support to proposed, strong federal legislation that will help control and correct the ravaging effects of some types of strip and surface mining. The legislation that we are seeking must be broad enough to encompass all forms of surface mining but should emphasize primarily the strip mining of coal since it is here where critical circumstances are evident, and where prompt federal concern is needed. Such federal legislation must be so written and strong enough in content so as to prevent the undercutting of strong state controls presently in effect in Kentucky, Pennsylvania, and West Virgina. Weak federal controls would betray the dedicated people in these states who with considerable courage and sacrifice have won such notable victories.

We want to make it very clear that we oppose the intervening of the Federal government to regulate surface mining in the states where strong laws are in effect and enforced. We are requesting federal legislation as an omen to those states who are dragging their feet, that it should be clearly understood that unless they move now to regulate surface mining and establish high reclamation standards, then the Federal government will assume the task.

Certainly we are not opposed to mining, for the products of mines are as necessary to us as to anyone else. We sympathize particularly with the problems that confront our deep mining industry and their efforts to cope with acid mine drainage and air pollution. We are not opposed to surface mining as such, for we know that it is often the only feasible and economical method of producing needed materials. We have not come here today to ask our congressional representatives to outlaw an indusry, but rather to control the devastating effects of surface mining that is evident across this land.

There are regions, however, where we feel that a hard look is needed. The ghettoes of our metropolitan areas and their depressing effects on our society are readily discernible to the populace. However, the impoverished areas of

Appalachia, for instance, partially created by uncontrolled strip mining, is not so evident—only a few of our citizens are aware of damages caused by strip mining because such operations are usually not evident from primary thru-ways, etc. However, in a flight over the mountains in the Appalachian region and parts of Illinois and Indiana, it is clearly evident to any discerning observer that the damages sustained by the land and its people are almost beyond belief.

Such observation compels us to question ourselves if the stripping of coal is worth the price in parts of these regions. And we are forced to ask ourselves if the short-term gains are worth the long-range detrimental effects on our other resources and to the people, foremost, who are left with an empty, depressing and purposeless environment. Can we justify to the future generations such churning of the bowels of the earth, in parts of our country, that in effect dim man's desire for dignity and his chances for a good living as well as social and spiritual advancement?

Our economic system is the best in the world but it sometimes exposes a questionable face—for it is paradoxical that we are destroying the beautiful mountains and valleys of one area to create an Eden in another. Such a practice is not consistent with the Federal government's declared concern for resource management nor the President's concern for natural beauty.

It can and must be said that some surface mine operators have shown great concern about the problems arising from surface mining and their efforts to reclaim mined land should be extolled. But not enough of these mining conservationists are in a position of influence within their own industry. If such were the case there would be little need for the hearing here today. The efforts of this segment of the industry have been overshadowed by the image created by the less concerned—for the latter have created an image that labels all operators in some regions as being rapists of the land and greedy grabbers of resources.

In some instances the operator is ignorant of the total damages done—that is to day he does not understand the extent of damages caused by land erosion, water pollution and long-range effects caused by major soil disturbances. This situation has been readily recognized by reclamation associations where, in some states, symposiums have been and are being conducted to educate the operators.

Then there exists the problem of geographical land structure where no amount of conscience or physical effort can completely correct or prevent widespread devastation from surface mining. This situation exists in mountainous and hilly terrain where contour stripping on some localities is a disgrace that, in our opinion, supersedes the right of mineral ownership. Even under strict laws and regulations now in effect in Kentucky and West Virginia it is questionable whether such practices can continue for long. Since the inception of the strong Kentucky law additional regulatory measures have been necessary to further restrict mining on steep slopes reducing the degree of slope from 33° to 28° where contour stripping can be reasonably practiced. Certainly more time is needed by these states to give their law and strict regulations a chance to work. Then too reclamation methods presently being used must have the benefit of some average climate seasons before they can be judged fairly in these states.

The problems involved in area surface mining (flat or rolling terrain) are relatively few when compared to contour strip mining. The rolling or flat terrain makes reclamation not only feasible but frequently leaves the land in an improved condition compared to the unmined land of the same area. Such reclamation successes have presented opportunities for coal publications to refer to the surface mining industry as "The Total Benefit Industry" since it is not difficult to provide improved recreation opportunities in some regions where area surface mining is carried out. Then too, in the arid western part of our country there is less soil erosion and contamination of the streams. As reported, the mining carried out there is more in harmony with the land but not without its own peculiar problems and need for controls. The large open pit mines are considered to be long-term operations with most of them lasting for several years. These too, present specific problems that should be included in any federal legislation.

We must remember that the need for state controls was recognized and initiated something like 30 years ago and since that time a few states have been able to gradually strengthen their laws to where effective controls are now in existence, as in West Virginia, Kentucky, and Pennsylvania. In some cases industry supported these trends towards more stringent laws but all too often every little item of improvement was strongly opposed by an alliance of related industries and associations whose repetitious cries of woe extended from one state to

another as stronger reclamation laws and controls were proposed. Such unreasonable opposition has greatly retarded the establishment of laws by individual states and has perpetuated the accumulation of a vast acreage of derelict lands across America. With such advanced techniques in use today, we cannot afford this "inch-by-inch tug of war" for the acreage of devastation will be tenfold the present in a much shorter period of time—thus the need for federal legislation to accelerate state action now.

One might ask can the surface mining industry afford the costs of strong reclamation requirements? The answer to that question is that the "proof is in the pudding." For even though there was much apprehension in the surface mining industry when strong laws were first proposed and then adopted in Pennsylvania, Kentucky and West Virginia, the industry is presently doing a thriving business under these strong requirements. It has been reported numerous times by reclamation agencies of these states that the cost of reclaiming the mined land is running approximately 0.11¢ to 0.15¢ per ton of coal mined rather than the exorbitant costs ranging from 50¢ to over $1 per ton as predicted by the industry.

Then one might ask what will happen to the future of coal from a competitive standpoint? From all unbiased and objective reports that we have seen, the predictions are bright for the future of the coal industry. Reports indicate that the demand for coal as a fuel for the generation of electric power alone will require every effort to meet the needs of an exploding population.

In support of the above statement we present a statement by Fred B. Bullard, President of the Kentucky Coal Association, as part of his remarks at the Strip Mining Symposium held July 13–14, 1967, at Owensboro, Kentucky: "As I have mentioned some of the plus values in the coal picture, I am sure some of you have wondered about the other side of the coin. What about the threat of nuclear power for example? Unquestionably increasing amounts of electric power will be produced by nuclear plants in the years ahead. The effect on coal must be viewed however, in the light of the ever-growing demand for electric energy. Coal today produces 54 percent of the nation's electric power. It is estimated that by 1980 nuclear competition will reduce this to 47 percent, but this 47 percent will require twice as much coal as today due to mushrooming power demands."

We recognize that each mining region and sometimes each operation has its own unique characteristics and that it is difficult to establish a criteria so detailed as to consider every peculiar regional characteristic. However, as presented in the Department of the Interior's 1967 report there are certain major objectives that must be consideed. These are (1) water quality control, (2) soil stabilization, (3) elimination of safety hazards, (4) conservation and preservation of natural resources, and (5) restoration of national beauty.

More specifically we recommend that in states where strip and surface mining for coal is practiced that requirements be modeled after the surface mine control laws presently in effect in Pennsylvania, Kentucky, and West Virginia. We recommend that specific strong points in each of these laws be considered by the Federal government and states as they prepare regulatory measures. These strong features are as follows: (1) The strong preplanning required by all three states, (2) The protection of "esthetic values" as required by the West Virginia law, (3) The minimum bond of $500–$1000 per acre required by the Pennsylvania statutes, (4) The responsibility for administration is lodged in a single agency and that the "agency head" have the right to refuse a mining permit as provided for in the laws of Kentucky and West Virginia, (5) The right of the regulatory state agency to select and fund its own legal and prosecution counsel such as that of the Kentucky laws, (6) The zoning regulations as provided for in the West Virginia law, (7) The regulation in the West Virginia law requiring payment by current surface mining operators of $30 per acre as a special reclamation fee, such funds now approaching one million dollars in West Virginia are to be used to help reclaim orphaned, previously mined lands and can be used as matching funds in cooperation with the Federal government, (8) The requirement in the West Virginia law that the operator be liable for treble damages where damages have been done to the property of others, (9) In the Pennsylvania law the requirement that a permit be obtained from the water resources agency in addition to a mining permit before operation can begin, (10) The "degree of slope" restriction now in effect in Kentucky which restricts mining on slopes greater than 28°, (11) Strong regulations controlling dredging operations should be included in state and federal regulations, (12) The inclusion of haulage roads

as part of the operation area to be bonded, (13) The requirement for a "prospecting" permit in the West Virginia law, (14) Requirements that reclamation must be kept current with the mining operation as stated in the West Virginia and Kentucky laws, (15) The refusal to allow mining by an operator whose permit was previously revoked or bond forfeited without correction as stated in the West Virginia law, (16) The "high wall" and "back filling" treatment required by the Pennsylvania law.

We believe most firmly in the people's expressed desire to protect unique and scenic areas from surface mining operations and in the most appropriate revalation that "man does not exist by bread alone." We, therefore, recommend that the Federal government make available matching funds to those states that have high, enforced reclamation standards and to others as they adopt them to be used to reclaim orphaned-mined lands that exist on both public and private lands. It is high time that we remove these ugly scars that blight the land and depress the economy. We also recomemnd that the Federal government seriously consider the establishment of a "mineral bank" similar to the soil bank but restricted to only those lands where mining is not recommended because of the inability to restore the land and to protect areas that have irreplacable scenic and unique values.

While we have dealt mostly with the strip and surface mining of coal in this report, we have stated the need to have federal legislation covering all forms of surface mining. As reported in an Interior report, while the history of Appalachia is bound to coal, the histories of other regions are tied to other mineral deopsits. The iron ranges of northern Michigan and Minnesota, copper from northern Michigan, Arizona, Montana, Utah, and Nevada; precious metals from Colorado, California, Idaho, South Dakota, and Nevada; and led-azinc from Idaho, South Dakota, Colorado and Illinois; phosphates of Florida; the stone quarries, clay and gravel pits, all have contributed to the economics of their present regions and the mining of each has left scars on the landscape and together a vast acreage of derelict lands.

It is recognized that surface mining of some form or another, and to some degree, is practiced in all 50 states and approximately 39 states have no reclamation standards or requirements—proof enough that we need federal involvement.

The League endorses the concept of states participating in interstate compacts and agreements if there are assurances that no one participant will be able to dominate or have a veto over action necessary in the public interest. If such a compact would require that its members adopt surface mining controls on a level with those now in force in West Virginia, Kentucky, and Pennsylvania it could do much good. But the present Interstate Mining Compact is not a regulatory body and only requires that each state adopt minimum standards of reclamation. Any recommendation put forth by the Compact must first be acted on by each of the member states before such regulation can be enforced in said state—and therein, we believe, lies the "Achilles heel" of the Interstate Mining Compact. State action and Compact agreements should work in cooperation with federal controls, not replace them.

Government and mining officials tell us that we haven't yet begun to strip and surface mine the coal deposits and other minerals located near the tops of our mountains and across every region of our nation. As one native of Appalachia put it, "This could be a blessing to our people or a damnation depending on how we go about mining it and the degree of reclamation required."

In this respect we recall a statement made by the president of the Harmon Creek Coal Company, "That if for some reason the land cannot be restored, it should not be mined."

All of us recognize the magnitude of the problems with which we are dealing. While none of us have all the answers, we do believe, however, that if the Congress adopts legislation as recommended in Senate Bills S. 217 and S. 3126 we will have taken a giant step forward towards a solution to many of the problems related to strip and surface mining.

Mr. Chairman, we trust that, in some degree, we have been helpful to this Committee. Once again we express to you and the members of this Committee our appreciation for the opportunity of appearing here and the privilege of presenting our views on a most critical issue.

Senator METCALF. Are there any other witnesses? I know that many of the witnesses patiently waited and finally after a long wait filed their statement. If there are any other witnesses here, however, we will be glad to hear them at this time.

If there are no further witnesses, all will have an opportunity to review or correct their printed testimony and the record will be kept open for 10 days for submission of additional material or supplemental material or such special matter as may be deemed necessary. That will be submitted to the committee. The staff will review it and include such as is deemed important and significant as a part of the record.

Many of the Western States or State associations have sent statements or letters making known their position on this legislation. Without objection they will be printed at this point.

(The communications referred to follow:)

STATE OF MONTANA,
OFFICE OF THE GOVERNOR,
Helena, May 1, 1968.

Hon. LEE METCALF,
Senate Office Building,
Washington, D.C.

DEAR LEE: I have been invited to comment upon the proposed "Surface Mining Reclamation Act of 1968" (S. 3132), now under consideration by Congress.

The purposes of the bill are laudable and should be given effect. In many states the scars of strip mining are constant reminders of the failure to adequately protect our environment. Even in Montana we can still see the havoc left by gold dredges in many our our otherwise beautiful little valleys.

Montana is aware of the problem and has taken positive action with respect to it. After a great deal of consultation with public agencies, mining companies, wildlife organizations and the Bureau of Mines and Geology at Montana College of Mineral Science and Technology, the Montana Land Board adopted modifications to its mineral leases, providing for restoration under such prescription as might be made by that board. Copies of pertinent language from Montana's uranium and coal lease forms are attached.

We now stand on the threshold of development of great coal deposits situated in Easter Montana. These deposits will be developed through strip mining. In recognition of the need for reclamation of affected areas, the Montana legislature passed an act in 1967 relating to the restoration of lands surface mined for coal. A copy of that statute is also attached.

Assuming that additional problems may exist, however, that will not be solved by these means, I could support legislation at the federal level which would in turn support and assist development of state laws and the administration thereof.

I do not believe that S. 3132 meets that requirement. It would allow the Secretary of the Interior to establish standards which must be met or exceeded by the states. It would seem far better to me for Congress to establish broad guidelines, and then to provide machinery to approve state originated regulations consistent with those broad outlines.

Frankly, S. 3132 as written gives too much authority to the Department of Interior and too little to the states. The bill recognizes, in Section 3(d), "That, because of the diversity of terrain, climate, biologic, chemical, and other physical conditions in mining areas, the establishment on a nationwide basis of uniform regulations for surface mining operations and for the reclamation of surface mined areas is not feasible." Then it goes on to lodge nearly total authority and responsibility with the Department of Interior. The delegation of authority to the Secretary of Interior is so board as to raise serious questions concerning the real part the states might play.

The concept of the bill tends to ignore the fact that any surface mining operation will necessarily cause some temporary adverse effects on the environment. In Montana we are convinced that a reasonable program for restoration of mined areas can enhance the environment and improve on nature in many areas. In other areas—where large, open pit mining is conducted, for example—the damage will be more permanent.

I have grave concern that the timetable proposed will lead only to chaos and confusion. The Department of Interior does not have the capacity to complete such a program in two years, either in terms of essential research and information or in terms of the techniques that will be necessary to bring about restoration. I know from our experience in Montana how complex such regulation can become.

The Treasure State has much undeveloped mineral resources. That development is essential to our economic life. We are equally cognizant of the value of our aesthetic resources and intend to guard them jealously.

Kind personal regards,

TIM BABCOCK, *Governor.*

CHAPTER 245

An Act to Provide for the Reclamation of Lands on Which Strip Mining of Coal Has Been Conducted; to Authorize the Montana Bureau of Mines and Geology to Enter Into Contracts for the Reclamation of Lands on Which Strip Coal Mining Has Been Conducted: Authorizing a Credit on Coal Mines License Tax for One-Half (½) of the Amounts Spent on Land Reclamation, and Amending Section 84-1303. R.C.M. 1947.

Be it enacted by the Legislative Assembly of the State of Montana:

Section 1. It is hereby declared to be the public policy of the state of Montana: The vast deposits of bituminous, subbituminous and lignite coal underlying the state of Montana are one of its most valuable natural resources and greatest assets. The development of these coal deposits will contribute greatly to the economic welfare and prosperity of the people of this state, in that such development will attract new industry to this state and assist in the expansion of existing industry. It is the policy of this state that the development of these coal deposits be encouraged, and that such development be brought about at the earliest possible date and in a manner most beneficial to the people of this state.

Many of these coal deposits are susceptible to development by strip mining methods, and, in fact, due to other factors certain of these deposits can be developed economically only by strip mining methods. Any undesirable results from strip mining can be to a great extent prevented or avoided by a proper program of reclamation in those areas where strip mining has been conducted. In order to reduce any undesirable effects of the strip mining of coal and in order to minimize any pollution of the soil and streams of this state by strip mining of coal, and to return to useful production lands which have to be strip mined, and to preserve and enhance the natural beauty of this state, it is the policy of this state to provide for and encourage the reclamation of lands on which the strip mining of coal has been conducted.

Section 2. The Montana bureau of mines and geology is hereby authorized and directed to enter into contracts in the name of the state of Montana with strip coal mine operators which will provide for the reclamation of lands on which the strip mining of coal has been conducted by such operators. The Montana bureau of mines and geology is authorized to sue and be sued in the name of the state of Montana to enforce the provisions of any strip mined land reclamation contract, and the bureau of mines and geology shall bring such court actions and take such other steps and actions as may be necessary to enforce the provisions of such contracts.

Section 3. All agencies of the state of Montana concerned with reclamation, soil or water conservation, recreation, fish, game, and wildlife, state parks, state forests, and state lands, shall cooperate with and assist the Montana bureau of mines and geology in carrying out and enforcing contracts for the reclamation of lands on which the strip mining of coal has been conducted.

Section 4. Any strip coal mine operator who shall enter into a contract with the Montana bureau of mines and geology providing for the reclamation of lands on which the strip mining of coal has been conducted, shall annually receive credit toward the payment of the coal mines license tax provided for in chapter 13 of title 84, R.C.M. 1947, in an amount equal to one-half (½) of the reasonable value of the reclamation work performed on such lands under such contracts during the preceding year.

The Montana bureau of mines and geology shall annually inspect each strip mining operation for coal in this state, and shall, if the operator of such mine has entered into a contract for the reclamation of strip mined lands, determine the reasonable value of all reclamation work performed by such mine operator during the preceding year. The bureau of mines and geology shall promptly after each annual inspection, report to the state board of equalization, the state treasurer, and the operator the reasonable value of reclamation work performed on strip mined lands during the immediately preceding year by each strip mine poerator, and one-half (½) of the amount so reported shall be deducted from coal mines license tax due from such strip coal mine operator pursuant to the provisions of chapter 13 of title 84, R.C.M. 1947.

95-623—68——23

Section 5. Section 84–1303, R.C.M. 1947, is amended to read as follows:

"84–1303. Payment of annual license tax. Such annual license tax shall be paid in quarterly installments for the quarters ending, respectively, March 31st, June 30th, September 30th, and December 31st in each year, beginning with the quarter ending March 31, 1921, and the amount of the license tax due for each such quarter shall be paid to the state treasurer within thirty days after the end of each such quarter *provided that one-half (½) of the amounts reported to the state treasurer by the bureau of mines and geology as being the reasonable value of reclamation work performed by a licensee on lands on which strip mining has been conducted shall be credited to such licensee on the first quarterly payment of the license tax due after such report is received, and on such subsequent quarterly payments until the licensee has received credit for the full amount thus reported."*

Approved: March 1, 1967.

STATE OF MONTANA COAL LEASE

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10. PROTECTION OF THE SURFACE, NATURAL RESOURCES, AND IMPROVEMENTS. The lessee agrees to take such reasonable steps as may be needed to prevent operations from unnecessarily: (1) causing or contributing to soil erosion or damaging any forage and timber growth thereon; (2) polluting the waters of springs, streams, wells, or reservoirs; (3) damaging crops, including forage, timber, or improvements of a surface owner; or (4) damaging range improvements whether owned by the lessor or by its grazing permittees or lessees; and upon any partial or total relinquishment or the cancellation or expiration of this lease, or at any other time prior thereto when required by the lessor and to the extent deemed necessary by the lessor, to fill any sump holes, ditches and other excavations, remove or cover all debris, and, so far as reasonably possible, restore the stripped area and spoil banks to a condition in keeping with the concept of the best beneficial use, including the removal of structures as and if required. The lessor may prescribe the steps to be taken and restoration to be made with respect to lands of the lessor and improvements thereon.

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STATE OF MONTANA URANIUM MINING LEASE

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3. Lessee shall prospect and explore for uranium with minimum disturbance to the surface of the land, all drill holes shall be securely capped when not in use. In any drilling operations, lessee shall comply with all of the provisions of law governing ground water, especially the provisions of Sections 89–2911 through 89–2936 of the Revised Codes of Montana (1947) and lessee shall at all times exercise due care to avoid contamination of ground waters.

If the lessee wishes to mine uranium it shall first submit a comprehensive plan of its proposed mining operations, including plans for restoration of the surface at the termination of said mining operations, to lessor and thereafter lessor shall have the right, at any time and from time to time, to impose reasonable restrictions on said mining operations for the protection of the land, water, livestock and persons on the premises.

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STATE OF MONTANA,
DEPARTMENT OF STATE LANDS AND INVESTMENTS,
Helena, April 18, 1968.

Senator HENRY JACKSON,
Chairman, Senate Interior Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR JACKSON: As Commissioner of State Lands for the State of Montana, responsible for the management and development of almost 6,000,000 acres of state owned grant lands, I would like to comment on S. 3132 known as the Surface Mining Reclamation Act of 1968.

Federal legislation, at this point of time, is unnecessary and will continue to be so until the states have shown that they are unable to cope with the problem. The problem insofar as the Nation is concerned is presently located mainly in the anthracite coal areas of the Appalachian region and is one of long standing. In Montana the problem is minimal as there are only two strip coal mines in exist-

ence, one is inoperative, the other is operating and has recently entered into a reclamation agreement with the School of Mines, under the provisions of the recently passed Montana Strip Mines Reclamation law. With this law our state has assumed leadership in strip mine reclamation in the West and we, as well as other states in a similar position, should be allowed to demonstrate what we can do before enacting federal statutes setting up standards that would not be feasible for semi-arid areas such as ours. Under the proposal the states would be given two years to come up with satisfactory state regulations and there is no assurance at the present time that the Montana regulations would be satisfactory from the National standpoint. In my opinion the administration bill actually only provides token acknowledgement of the prerogatives and rights of state government for, if the state's laws, do not conform exactly to the federal standards promulgated, the federal law will take precedence.

I would like to suggest that consideration of this type of legislation be deferred for at least five years in order to give the states involved with this problem an opportunity to come up with procedures of their own to accomplish the objectives of the act. If this would be impossible to achieve then I sincerely request that the semi-arid western states be removed from consideration under this bill.

Your consideration of this request would be earnestly solicited.

Sincerely yours,

MONS L. TEIGEN,
Commissioner, State Lands and Investments.

MONTANA BUREAU OF MINES AND GEOLOGY,
OFFICE OF THE ASSOCIATE DIRECTOR,
Butte, Mont., April 30, 1968.

Hon. HENRY M. JACKSON,
Chairman, Senate Interior Committee,
Washington, D.C.

DEAR SENATOR JACKSON: This letter is in reference to U.S. Senate Bill 3132, also known as the Jackson Bill and the Administration's Bill on Mined-Land Conservation.

The bill speaks glowingly of cooperation between the Secretary of the Interior and the States, and of States taking the initiative in promulgating the rules and regulations on mined-land reclamation, yet a careful reading of section 7 of the bill entitled "State Plan" shows that the Secretary would have absolute and unequivocal power to approve or disapprove the State plan unless it follows strictly the guidelines set in section 7. Where is the "cooperation" and the "State initiative" in a course of action in which the Secretary spells out in detail what the States shall do, leaving up to the State only the choice of words in which to express the action—words on which he himself will ultimately pass with approval or disapproval?

Section 7 would positively negate Montana's current plan of voluntary mined coal-land reclamation which has the approval of our 1967 Legislature.

Section 7A calls for promotion of "an appropriate relationship between the extent of regulation or reclamation that is required and the need to preserve and protect the environment." Let us see how this would work with the Berkeley Pit at Butte. There is an unquestioned need for the copper of Berkeley Pit, and the only way to get it is to mine it by open-pit methods. The pit is in an area now treeless and with but sparse surface vegetation on a sandy, rocky soil. Obviously, it would be pointless to try to reclaim this land (the mine waters are being reclaimed); yet section 7C insists that the State plan contain criteria relating specifically to (among others) "(iv) the reclamation of surface-mined areas by revegetation, replacement of soil, or other means, (v) maintenance of access through mined areas, (vii) the protection of fish and wildlife and their habitat." The Berkeley Pit could not operate under such regulations unless section 7A were strengthened to specifically exempt certain classes of mines from provisions of section 7C.

There are other mined-land reclamation bills before the Senate: No. 217 (the Lausche bill) and S–3126 (the Nelson bill). Mr. Lausche's and Mr. Nelson's names also appear on S–3132 (the Jackson bill), which is being discussed. Present comments are being confined to Senate Bill 3132 which is the least objectionable of the three. The other two are far too restrictive for Montana mining industry.

S–3132, if passed, will require State legislative action to set up a single State agency as the administrator of the "State Plan," and will require State funds

to match Federal funds fifty-fifty in training personnel in this administration to suit the Secretary of the Interior—otherwise the Federal Government takes over. It is a bad bill for Montana.

Far better let the States do their own regulating on mines and the mining industry, so that each area can pass laws suitable to its environment. There are other objectionable features of this upon which I will not comment as I know others in this State are doing so. I wish to keep this statement brief enough so that, perhaps, some notice might be taken of it.

Sincerely,

UUNO M. SAHINEN,
Associate Director, Montana Bureau of Mines and Geology, and Director, Montana Coal Resources Research Council

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MINING ASSOCIATION OF MONTANA,
Butte, Mont., April 29, 1968.

Hon. HENRY JACKSON,
Senate Interior and Insular Affairs Committee,
Washington, D.C.

DEAR SENATOR JACKSON: The Mining Association of Montana would like to comment on Senate Bill 3132.

This bill, which was introduced on March 11 as S. 3132 provides that a state will come under federal control if it fails to submit an acceptable state program for mined land reclamation to the Secretary of the Interior within two years after the effective date of the Act. Although the states are given the opportunity to devise their own plans, such state plans must comply with fairly detailed federal requirements spelled out in the Act. Thus, the choice is between federal regulation by federal officials, or federal regulation by state officials.

The mining industry accepts the idea that mining should be carried on so as not unreasonably to damage other resource values. However, because of the extreme diversity of land use, land values, surface area disturbed in relation to value of minerals extracted, and esthetic standards, it is usually recognized that national standards governing mined land reclamation are impractical. Regardless of whether or not the proposed law provides for recognition of local conditions, we can reasonably expect standards to be imposed on the mining operations in the semiarid western states based on the experience of Department of Interior officials more familiar with the problems of other areas.

Most of the abuses which have occurred and which have been well publicized, have occurred in the Appalachian areas in eastern United States and involve the consequences of surface mining of anthracite coal. The problems of mining and reclamation here in the West are so totally different that they almost defy comparison.

We strongly urge the defeat of S. 3132. It is our opinion that any necessary regulations for mined land reclamation should be enacted at the state level. The 1967 Montana Legislature enacted a law providing for the reclamation of strip coal mined lands. This Act is a suitable vehicle for amendment to provide for the reclamation of all mined lands.

S. 3132 provides only token state participation in solving this important problem. We urge genuine state initiative and independence in approaching and solving this problem.

Any federal participation in this area should be limited to federal grants for the purpose of financing the reclamation of old mined areas. As far as the current mining and reclamation activities are concerned the states can do a better job on their own.

Very truly yours,

PETER J. ANTONIOLI,
Secretary-Manager.

STATEMENT BY HON. STANLEY K. HATHAWAY, GOVERNOR OF THE STATE OF WYOMING

The State of Wyoming is vitally concerned and interested in proposed Federal legislation to regulate surface mining, with special reference to S. 3132 and also to any similar legislative proposals. Wyoming is concerned because of such important factors and considerations as (1) the economic impact on our state and our mining industry, (2) the conservation of the surface natural resources

of our state, (3) the responsibility of the state for the control of its resources, (4) the further abrogation of state authority by federal agencies, and (5) a coercive approach to a problem rather than the encouragement of a cooperative approach at the grass roots levels.

We are not unmindful of the problems in some areas of this great nation resulting from surface mining. We note that states have already made great progress in solving those problems, and we have no doubt that many others are at work on the problems and are preparing to adopt the necessary legislation. For these and other reasons, we do not believe that S. 3132 is necessary, nor do we believe it to be the proper solution for the problem.

I should like to emphasize that conservation and conservation problems are of concern to all citizens of Wyoming. As we seek to develop Wyoming's natural resources and build our state's economy, we most certainly want to preserve Wyoming's beauty and grandeur. We want to conserve its natural resources.

There is no question in our minds that some regulation of surface mining is required. Each state in which there is surface mining has problems unique to its conditions. This is primarily the responsibility of the state.

Another factor which is of importance in some areas is the competitive situation resulting from mining the same mineral under similar conditions in two or more neighboring states. It is recognized that the failure of one competing state to enact adequate control measures can have a significant effect upon the competition for markets by a neighboring state. This, we are convinced, can be corrected without the establishment or expansion of administrative edicts. Further, we wish to emphasize that surface mining regulation should not be used to equalize competitive situations. It should be limited to its stated purpose—to conserve natural resources.

Until recent years there was a very limited amount of surface mining in Wyoming. Now our surface mining is increased and has become an important factor in our economic development. For some time we have realized that the rehabilitation of surface mined areas would cause increased concern. We knew that our soil, climate and moisture conditions would result in different land use and revegetation problems than those found in the Middle West and in the Eastern states.

Four years ago, one of Wyoming's major coal companies provided for a grant of $25,000 to the University of Wyoming for research in the revegetation of disturbed lands. This research is being continued. Other mining companies have been experimenting with various rehabilitation practices. Some have had encouraging results. A Federal Field Study Team from the Department of the Interior, acting under the Appalachian Regional Development Act of 1965, inspected a number of our surface mine operations. This team was very favorably impressed by one surface mine rehabilitation project in particular. The members of the team stated it was one of the finest examples of rehabilitation that they had seen in their extensive travels to surface-mined areas. We stress this because this work was done on a voluntary basis. There was no compulsion.

We should like to emphasize that the interest of our mining people and their cooperation, along with that of the various conservation groups, can contribute much to the success of any regulatory program. We in the West believe this to be the most desirable method of attacking our problems.

In Wyoming, as we gain more knowledge of our problems in the rehabilitation of surface-mined land, we plan to take the necessary steps to develop a sound program. We believe that we have much of the information needed to aid us in establishing standards for rehabilitation practices. We shall seek state legislation to establish the regulations required to ensure compliance.

I should state that our mining industry has kept us informed on its progress in securing voluntary cooperation in research and experimentation.

The industry has met with various conservation groups and discussed its problems with them. I have personally been assured of the industry's cooperation in seeking legislative action to establish the authority of the state in this field. It is my conviction that our state can and will do the job in rehabilitating lands disturbed by surface mine operations.

We do not believe it is necessary for the federal government to encroach in the area of conservation of a state's resources for the following stated reasons:

1. States are aware of the problems and are working on solutions; indeed, some states already have satisfactory programs for the regulation of surface mining.

2. The states can regulate surface mining effectively. In each state there can be found the necessary expertise and competence to develop effective control measures.

3. It will be extremely difficult, if not impossible, to establish a nationwide program which will have the flexibility needed to meet the widely varied conditions throughout the nation. The Rocky Mountain Region has entirely different geographical, geological and climatic conditions than do the Middle West and Appalachian states. Even within individual states there are many different conditions to consider. In Wyoming there is a wide variation in altitude, rainfall and soil conditions, and what will prove an effective control measure in one area may be entirely unsatisfactory one hundred miles away.

4. State regulation can be accomplished with much less expense than federal regulation. The separate states can assume the additional responsibilities with a minimum of additional employees. A federal program would require a new agency, or a widely expanded existing agency.

5. Additional research in problems of revegetating lands in the semi-arid areas of the West can be conducted by the several state universities. This research should be a responsibility of the individual states and should not be dependent upon federal subsidy.

6. There is much merit in encouraging the states to accept full responsibility for the rehabilitation for surface-mined lands. The cooperation of the people at the grass roots level to solve a problem is to be preferred over a federal compulsory program.

7. S. 3132 does not adequately protect the state, the mine operator or the land owner from arbitrary decisions or actions by the Secretary of the Interior or his agents.

We in Wyoming would like to respectfully suggest and urge that states with similar problems resulting from surface mining be allowed the opportunity to cooperate regionally in solving their problems in this field. States could cooperate in developing legislative objecctives. State regulatory agencies could be recommended. Rehabilitation standards could be adopted. Duplication in research work could be avoided. Above all, by common agreement and action any competitive advantage to one state over another resulting from regulations could be prevented.

Activity in this regard in the Rocky Mountain area, for example, could be coordinated through the Federation of Rocky Mountain States, of which I have the pleasure to serve as chairman. The Natural Resources Council of the Federation would be most eager to work with member states in cooperative efforts leading to state legislation which would establish uniformity among Rocky Mountain states in solving the problems that are common to all of them.

Thank you.

STATEMENT OF R. W. BEAMER, EXECUTIVE SECRETARY, THE WYOMING MINING ASSOCIATION

To the honorable chairman and members of the Senate Committee on Interior and Insular Affairs: The Wyoming Mining Association is an organization of 32 mining companies, the allied industries, and individuals. It includes all major mineral producers in the State of Wyoming. The minerals produced by these companies include: bentonite, coal, gypsum, iron ore, limestone, trona, uranium, and miscellaneous quarry products. Many of these minerals are produced from surface mines.

Much of our mineral development has occurred during the past 15 years. The mining and processing of minerals has become an important factor in the economy of our State. It provides employment for approximately 4,000 men and adds substantially to the tax base. Its products are utilized in the industrial life of this Nation. The State of Wyoming has endeavored to encourage those developing mineral resources so that its economy may grow and prosper.

Proposed legislation, such as S. 3132 and similar bills, is of concern to our industry. We do not consider it to be the best approach to correcting problems which may result from surface mining operations. We suggest that the several States, with the cooperation of the surface mine operators and other interested parties, can solve any problems with a minimum of administrative costs. It is a function which the States can and should be permitted to perform.

Approximately four years ago, the Wyoming mining industry began working on problems connected with surface mining. It was found that the most difficult problem was the revegetation of disturbed lands. Most of these lands were sparsely vegetated and may be called "sage brush lands" because of limited rainfall and the predominance of sage brush. One mining company granted the Uni-

versity of Wyoming the sum of $25,000 to conduct a 5-year research project on the revegetation problem. Other companies experimented with various types of reclamation practices. In our efforts we found the great majority of our surface mine operators to be cooperative and willing to conduct surface mine reclamation on a voluntary basis. To us, this indicated that our reclamation problem could be solved readily on a State basis and we have been proceeding along this line.

When the Honorable Clifford P. Hansen, a Member of your Committee, was Governor of Wyoming, we conferred with him relative to our views on this problem. He was aware of our efforts and gave encouragement to us. In a similar way, we have cooperated with Governor Stanley K. Hathaway. It is contemplated that legislation will be adopted by our Legislature which will be adapted to Wyoming problems and conditions. We are confident that our State Government, our University, and our industry have the competence to handle our surface mining problems.

It is our understanding that a number of States have adopted surface mine regulations. Others are preparing to do the same. It does not appear that Federal regulation, as proposed in S. 3132, is required. We recommend that the States be given an opportunity to develop programs which will meet their problems and conditions.

Of special concern to us is the desire to establish nationwide standards for reclamation practices. It is our belief that such an approach lacks the flexibility to meet the many conditions that will be encountered. The widely varied conditions within our own State indicate the need for flexibility within our own boundaries. This situation is even more difficult when comparisons are made with the Middle West or with the East. Further, the type of mineral being mined creates its own special problems. This wide variation and multiplicity of reclamation problems and practices is a strong argument in favor of State control as opposed to nationwide Federal control and standards.

It has been suggested that States with similar problems, such as our semi-arid Rocky Mountain States, be given the opportunity to cooperate in solving the problems peculiar to the Region and in establishing regulatory standards for the Region. We favor such an approach to the surface mining problem.

In conclusion, may we emphasize our belief that the efforts of the States, the mining industry and other interested parties, can provide the leadership required to bring about surface mine reclamation practices in all mine operations. We urge that your Committee defer action on S. 3132 and similar proposals so that further study may be given to placing a greater degree of responsibility and authority with the States for the development of programs, standards and regulations relating to surface mining activities.

STATEMENT OF THE NEW MEXICO MINING ASSOCIATION

The New Mexico Mining Association is opposed to S. 3132 and similar legislation and respectfully urges the Senate Interior Committee to consider these points:

1. This legislation obviously is intended to deal with a specific problem affecting a limited geographical area. The net effect, however, is to apply a national solution to an essentially local problem. As often happens in such cases, some of the proposed legislation makes allegations and provides regulation which—probably inadvertently—will create more problems than solutions.

2. We do not deny that in some parts of the United States certain problems may exist. These problems do not now exist in New Mexico, however, and it is unlikely that they ever will exist to any large degree. Should difficulties connected with surface mining arise within the state in the future, we believe appropriate state agencies already are aware of the potential problems and are prepared to take such action as may be desirable. Such action would, beyond doubt, supply more effective solutions to specific local problems than any regulation enacted at the federal level or forced upon the state by a federal agency.

3. The allegations contained in S. 3126, Sec. 2, amount to a declaration by the Congress that surface mining is generally reprehensible. These are both unfair and inaccurate. To the charges that this mining "destroys natural beauty," "damages the terrain for an indefinite period," and "adversely affects commercial and industrial development", we would point out that the largest mining opertion in the state actually has added to the interest and beauty of the area

and has been a major tourist attraction. Surface mining in New Mexico, far from adversely affecting commercial and industrial development, has been the basis on which the economies of entire areas have rested.

4. The surface mining carried out in New Mexico to date consists mostly of metal mining from low grade ore deposits which cannot be mined economically any other way. The largest of these mines is more than fifty years old and probably will be mined for many more years to come. Typically, these deposits have long lives and quite often the estimated life span of these mines increases as the ore body is studied and as technology improves. Secondary recovery of minerals from waste dumps is a common practice and can be expected to increase in coming years.

5. In a survey made two years ago, the State Bureau of Mines and Mineral Resources determined that in the strip and surface mined areas in New Mexico, which included waste dumps from such operations, the land involved comprised between 6,000 and 7,000 acres. This acreage is less than .01 of one per cent of the state's total land area. This, an all-time total, is of a magnitude little, if any, more than that of the virgin land which is disturbed annually in normal urban development. In New Mexico and similar western states, much of this land is only sparsely covered by vegetation and some of this is of a type which conservationists have considered predatory growth.

6. The allegation is made that surface mining also contributes to water pollution. Where such problems have existed in New Mexico, prompt action has been taken by the operators of the properties involved to prevent damage. In addition, federal and state legislation dealing with water pollution already is on the books. New Mexico mine operators also have taken action to prevent soil erosion and, working in cooperation with federal and state agencies, have been conducting experiments in planting on waste and tailings disposal areas.

It is our opinion that nationwide standards and regulations governing surface mining are inadvisable unless they adequately take into account the conditions existing in New Mexico regarding climate, topsoil, population density, land value, and ultimate potential use of reclaimed lands. We submit that such regulation is better left to the states to enact at such time as it may be needed.

We would like to add, also, that we who operate mining properties in New Mexico are jealous of our state's natural beauty and many of us have taken jobs here with the intention of spending our lives in these mining areas. We believe that we have a greater stake in preserving a good living environment than anyone from another area who may, or may not, visit our region in their lifetimes.

Statement of the Utah Mining Association

The Utah Mining Association, representing the major portion of the mining interests in the State of Utah, respectfully submits the following comments on S. 3132, which would provide for federal regulation of surface mining operations and the reclamation of surface mined areas.

Where mined land reclamation is a problem it should and can be handled on the state level. In Utah, for example, there is no strip mining; the only surface mining is by open pit. Notwithstanding the fact that the largest copper mine on the North American Continent is situated in Utah, the total land area disturbed by surface mining is less than 2/100 of 1% of the total land area of the state. In Utah, a much larger land area has been disturbed by the Interstate Highway System.

The Utah Mining Association opposes enactment of S. 3132 and pending related bills for the following reasons:

1. Utah and the several Western States are capable of regulating surface mining operations within their respective jurisdictions. All surface mining operations affect other surface values. The efficient regulation of surface mining requires practical accommodation of the various uses and values. The several states are intimately familiar with local conditions and are therefore in a better position to make a reasonable and appropriate balancing of interests among affected resources values. Even though S. 3132 recognizes that uniform national regulations are not feasible because of diversity of conditions in mining areas, the ultimate control would reside in the Secretary of Interior, and the bill would establish elaborate criteria for all state plans. The states would be required to conform with uniform legislative and administrative standards set by the Federal Government and the determination as to whether or not a state is proceeding

properly would rest solely within the judgment of the Secretary of the Interior. S. 3132 prescribes no limitation on the Secretary's actions and does not provide for judicial review of the Secretary's decisions. We oppose this usurpation of regulatory authority by the Federal Government.

2. The bill would initiate a new federal spending program at a time when Congress is under heavy pressure to cut federal spending and to increase taxes. Expenditures by the Federal Government for regulation and supervision of surface mining operations are unwarranted.

3. S. 3132 would give the Secretary unreasonable regulatory authority over surface mining operations in the following particulars:

(a) The bill does not limit the activities which may be required or prohibited. For example, a plan must "preserve and protect environment." Under such a standard an administrator could make requirements so costly that recovery of the minerals in the land would be uneconomic. We acknowledge that mining operations should be carried on so as to minimize damage to other values in the land, but regulations should be subject to a requirement that they recognize the necessity for a reasonable and appropriate balancing of interests among all affected resource values.

(b) The bill would permit the Secretary to make (without recourse) many important determinations solely on his own judgment or on the basis of what he "deems necessary." For example, he may assess, collect, remit or mitigate penalties for failure to comply with the federal regulations.

(c) The bill would provide for unnecessary and unreasonable regulation and control of extraction of minerals and of mining methods employed. No longer would the ownership of land vest in the owner the right to mine. Before surface mining operations could be commenced, the owner or operator would be required to submit a mining plan, have it approved, obtain a permit to mine and post a bond. Under established bonding procedures, this would prevent many mining operations.

(d) Such regulations would create problems which would serve to restrict and reduce exploration and development so critically needed to provide the natural resources essential for our domestic economy and national defense.

CARSON CITY, NEV., *April 26, 1968.*

Hon. HENRY M. JACKSON,
Chairman, U.S. Senate, Interior and Insular Affairs Committee,
Washington, D.C.:

It is my understanding S. 3132 on surface mining controls is coming up for hearing. Nevada is 87 percent federally owned and Federal agencies already possess authority to control surface mining operations. There is no provision in bill to take into consideration economic effect on local government and no provision for local government participation in restoration areas. Economic effect is most significant in Nevada. Our major mineral producing areas would not have been possible if such legislation existed during their discovery and development. Nevada recreation master plan identifies all areas here which have high recreation and aesthetic values. Balance of State, about 90 percent of it, would not have great values in esthetic considerations. We can only look on S. 3132 as needless handicap on Nevada's economic growth. Our old mining developments such as Virginia City, Berlin, and others possess some of our highest recreational values. Surely there should be no Federal objection or control over mining developments in areas where recreational and aesthetic considerations are not a factor.

I am confident S. 3132 would depress the exploration programs of entire mineral industry. There may be merit in bill for control of coal and iron strip mining in East, but to impose such controls in the West where no problems exist will only create a great problem. Our experiences with many pieces of Federal legislation aimed at control of State functions is sufficient grounds to oppose this bill. If surface mining is also to be under Federal control, the highly mineralized States will be handing over to Federal Government control of their economic and social growth. The bill is comparable to the highly obnoxious Wholesome Meat Act and other recent legislaiton and, like it, will only force prices higher, and add to the burgeoning Federal bureaucracy and cost of Federal operation. We must maintain our ability to compete in worldwide market. This bill can only add more grief to the U.S. balance of payments difficulties we face currently. Thank you.

PAUL LAXALT, *Governor of Nevada.*

STATE OF OREGON,
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES,
Portland, Oreg., April 24, 1968.

Hon. HENRY M. JACKSON,
Chairman, Senate Interior and Insular Affairs Committee,
Senate Office Building, Washington, D.C.

MY DEAR SENATOR JACKSON: This communication is in regard to the hearings your Committee is holding on Senate Bill 3132 and other bills pertaining to the control of surface mining and the reclamation of mined lands. I would appreciate your consideration of the following and express the wish that you will include it in the testimony given at the hearings.

Governor Tom McCall of Oregon recently addressed a letter to Secretary of Interior Stewart Udall in regard to proposed legislation concerning regulation of surface mining as follows:

"MY DEAR MR. SECRETARY: Thank you for your letter of March 15 inviting me to comment on the proposed legislation regarding regulation of surface mining.

"I share with you and the officials of many other states the realization that the abatement of many unwholesome side-effects stemming from certain surface strip mining operations and other related stream and air pollution situations represent a matter of vital importance on a nation-wide scale. I recognize also that it is to the public interest that every effort be made to adequately conrol surface mining.

"The work of various Federal agencies in calling attention to the problems and the urgent need for remedial action I feel merit the utmost commendation The State of Oregon is glad to have been of assistance in providing some of the data used in these studies. Cooperation of this type and collaboration in other similar ways I regard as an important and essential relationship between Federal and State governments. Furthermore I concur with the premise that the Federal Government should assume the role of leadership when it comes to providing counselling and guidance concerning optimum standards and doing basic research pertaining to implementation problems of a technical nature.

"As you are aware, the State of Oregon has made great strides and is a leader in legislation concerning environmental control. My inquiries regarding regulation of surface mining show that here too strong controls not only exist but planning is going forward which will strengthen and broaden the existing legislation, rules and regulations. Consequently I was most concerned with the proposed legislation which you enclosed with your letter for my evaluation of it indicated that it places too much reliance on Federal control and does not give the State the flexibility which I feel is desirable and necessary. Frankly I think this matter can best be handled by stringent monitoring at the State level.

"I do want you to know the State of Oregon looks forward to cooperating with you in this field. I appreciate your calling to my attention the proposed Federal legislation."

The State of Oregon Department of Geology and Mineral Industries joins with Governor McCall in opposition to the proposed legislation you are considering today.

In reviewing the summary of the act under Sec. 3, Congressional Findings, Par. B, I find that we can agree with most statements contained therein. However we strongly believe that in the main this paragraph today applies to a relatively small segment of the total surface mining industry and that in those states where this does apply, steps have already been taken to control the problem. We cannot argue with the concept that control is needed where the effects of surface mining contribute to degradation of the property of others but we cannot for any reason see why this problem requires Federal regulation of all surface mining operations.

In the section concerning the requirements for the plan that the Secretary of Interior shall require, we find very little that is not already controlled and regulated by various agencies of Oregon State Government, such as the State Sanitary Authority, the State Board of Health, the State Fish Commission, the State Game Commission, the State Division of Lands, and the State Bureau of Labor. This being the case, we see no reason for the Federal Government stepping in and usurping our authority as it has done in the field of water pollution and noncoal mine safety, amongst others. We find this rapid erosion of State responsibilities by the Federal Government to be most discouraging and feel that it should stop.

Sec. 5 speaks of Federal-State cooperation. Actually this bill does not give the states any authority to control surface mining inasmuch as the sole authority is vested in the Secretary of the Interior. The Secretary, according to this proposed legislation, will approve any State plan and monitor the operation of the plans within the states, will determine the amount of Federal assistance that will be given, and may, at any time, withdraw his approval of a State plan as he sees fit. The Secretary is authorized also to impose monetary penalties as well as civil and criminal penalties. Frankly it depressed me to read that the mining industry in our State is held in such poor esteem at the national level that it is felt criminal penalties will be necessary to control it. My point here is that this is not a bill to allow for State control of surface mining within our boundaries but rather a device by which the Federal Government will pre-empt State control.

The State of Oregon has an excellent record in the control of air and water pollution, land use, fish and wildlife protection, and reforestation. Our State agencies have demonstrated that they are staffed by dedicated people whose interest is in the people of the State of Oregon and who have time and again demonstrated their willingness to work with the people and with the diverse industries of the State in solving State problems. Each and every individual mining operation will have its own specific set of problems, including those which apply to adverse effect on the public good. In our estimation there is only one reasonable means by which these problems can be solved—that is, by cooperation between the State and the particular mining operation. In any individual case there will be strong economic overtones involved in reclamation and we strongly believe that our State should have the right to determine for itself what manner these economic considerations best serve the needs of the people of Oregon. For these reasons we find that we must strongly oppose the bills you have under consideration today. Bills such as these, we feel, do not encourage strong local government and if it is the purpose of this proposed legislation to weaken local authority they should be dismissed by your Committee.

Thank you for allowing us the opportunity to submit this testimony.

Sincerely yours,

HOLLIS M. DOLE, *State Geologist.*

STATEMENT OF HON. JACK WILLIAMS, GOVERNOR, STATE OF ARIZONA

As Governor of the State of Arizona, the nation's largest producer of copper, I welcome this opportunity to present Arizona's views on the proposed Surface Mining Reclamation Act of 1968.

The position of the State of Arizona is that Senate Bill #3132 is not in the best interest of this state. On behalf of Arizona, I wish to formally express my opposition to this bill.

While recognizing the needs for land reclamation in some areas, we feel that specific reclamation projects must be designed for the specific industry and terrain to which it will be applied.

To date, Arizona does not have a problem with surface mining land reclamation. If such a problem develops at some future time, the people of Arizona feel that they are competent to recognize it and to correct it through appropriate state legislation.

We presently feel that the contributions of the mining industry to the Arizona economy far outweigh the existing or contemplated disturbances which occur on desert tracts.

Thank you for your consideration.

IDAHO MINING ASSOCIATION,
Boise, Idaho, April 29, 1968.

Hon. HENRY M. JACKSON,
Chairman, Senate Committee on Interior and Insular Affairs,
New Senate Office Building,
Washington, D.C.

DEAR SENATOR JACKSON: We have been requested by our State Governor, Don Samuelson, to review and submit to the hearing before your Committee on Interior and Insular Affairs on April 30 and May 1 our comments on the proposed "Surface Mining Reclamation Act of 1968" (S. 3132).

Pursuant to that request we have analyzed the bill carefully and it is our sincere conviction that, if enacted, it would severely handicap the surface mining industry which it recognizes as "significant and essential" and would substantially reduce that industry's contribution to the "economic potential of the Nation."

We regret that we cannot at this time send a representative to appear at the hearing in Washington and present our views on the many deficiencies and undesirable provisions we find in this legislation. However, we have read the statements that will be presented by the Idaho Bureau of Mines and Geology and by the Phosphate Lands Conference, and we would like to state for the hearing record that we strongly endorse and concur in those statements.

It would serve no useful purpose to reiterate in this letter the many valid objections and criticisms presented in the testimony of these representatives of Idaho interests. They have made an excellent case for the mining industry's position with respect to this legislation.

There are a few major faults and shortcomings, however, that warrant additional emphasis.

One of the most unacceptable features of the bill is its application of the now-familiar "carrot-and-club" concept of Federal-State cooperation, under which the States must submit to the "club" of federal domination and control or lose the "carrot" of federal financial assistance. Under this concept, the bill's recognition of the desirability of state administration of programs for mined land reclamation and the need for adaptation of such programs to local conditions is meaningless and futile. Eventually, federal requirements will have to be met or they will be imposed and the states have no recourse because there are no provisions for judicial appeal from the unlimited discretionary authority of the executive department.

This "carrot-and-club" concept has already been proven unduly cumbersome and onerous in the case of water quality control, and in several situations has delayed rather than accelerated, progress toward the intended objective of that program. Experience under the highway beautification and air quality control programs has been little, if any, more satisfactory.

We seriously question the advisability of this approach to the problems of mined land reclamation. We believe it will impede rather than stimulate progress toward their solution, because we doubt very much whether the federal government, in its present fiscal crisis, can afford, at this time, the financial assistance to states that this legislation provides.

If it should be enacted, it seems to us that Congress will be most unlikely to appropriate for a new program the funds the law would authorize. Consequently, the states, many of which have equally serious budget problems, may find it advisable to postpone development of their own programs until federal matching funds are forthcoming.

We also feel very strongly that this type of legislation is premature. It attempts to move too far and too fast, in a problem area that is still largely nebulous and undefined, under the control and direction of authorities who are ill-prepared for the task. The bill itself, sponsored by these authorities, is ample justification for this view. Its terms are ambiguous and defy consistent interpretation. It provides no congressional guidelines or definable limitations on administrative power. It demands the establishment of criteria of environmental controls by the states, but provides no guidelines or standards as to the objective of those controls. Its broad authority for unilateral federal action within the framework of federal-state cooperation suggests uncertainty of procedure and vacillation of administrative direction. It advocates state programs tailored to local conditions, but permits unrestricted federal veto and/or revision of programs determined by the individual states to be best adapted to their needs and most beneficial to their interests.

It is our considered view that the granting of such dictotorial powers to one individual—the Secretary of the Interior—over all surface mining operations in the nation, whether on public or private lands, is unwise and represents an intolerable diversion from our established system of checks and balances.

It would seem to us the better part of wisdom to defer consideration of this legislation until the requirements for mined land reclamation have been more clearly defined and the feasibility of solutions has been more accurately evaluated.

Another major cause for our concern and apprehension about this bill is the uncertainty of its intended purpose. When the Secretary of the Interior presented

the bill to the Senate and recommended its passage, he stated that its purpose is "to prevent . . . the needless degration of the environment . . . and to assure that reasonable steps will be taken to reclaim mined areas after surface mining is completed." This terminology does not appear in the bill, however. The bill refers to regulations that would "prevent and eliminate such burdens and adverse effects" as impairing natural beauty and destroying wildlife habitat, and it requires assurance that adequate measures will be taken to reclaim surface mined areas. This discrepancy leaves much room for controversy, and, since all surface mining operations must necessarily cause some burdens and adverse effects on the environment, it could mean the difference between deterioration and continued growth of the phosphate mining industry which is so vital to the economic welfare and prosperity of the southeastern sector of Idaho.

We feel our apprehension is more than justified by the experience of our phosphate industry during the past two years in its efforts to work with the Interior Department toward a mutually-acceptable modification of the impractical and unworkable new regulations proposed for reclamation of mined areas on federal phosphate leases.

The mining industry of Idaho is not opposed to reasonable regulations designed to prevent needless degradation of the environment and to require reasonable and necessary reclamation of the mined areas after the mining is completed. We fully concur with the philosophy implied, if not expressed, in the proposed bill that the problems of protection and reclamation of lands mined by surface methods can be most efficiently and effectively solved under state programs adapted to local conditions and administered by indivduals who are thoroughly famliar with all the technical, economic and social factors involved and are therefore most qualified to make judgments as to the need and value of the lands for other beneficial purposes in determining the degree of reclamation necessary.

We seriously doubt the necessity for imposition of federal control and supervision in this problem. We feel it would aggravate the administrative problems, require unnecessary duplication of effort and expense, and, in all likelihood, would entail restrictions that would impede the economic progress of our industry and our state.

In this part of the country it often seems that the prevailing philosophy in federal public land agencies is something less than sympathetic to our needs and aspirations. It seems to reflect, rather, the pressures of populated areas which have grown and prospered from the beneficial use (and often misuse) of their lands and now seek to handicap the development of the less populous western states by impeding and preventing the use of the lands within our borders.

We respectfully request that consideration of this legislation be deferred at least until the Public Land Law Review Commission's comprehensive review of the public land laws and their administration has been completed, and the impact of its recommendations on the problems of mined land reclamation is known.

We also request that this letter be incorporated in the hearing record.

Respectfully submitted,

A. J. TESKE, *Secretary.*

STATEMENT OF THE STATE MINING AND GEOLOGY BOARD OF CALIFORNIA

The State Mining and Geology Board, at a regular meeting on April 8, 1968, after having reviewed the proposed federal legislation on surface mining regulations and having discussed these bills, as well as considerable supplementary information, unanimously went on record as not approving any legislation that would permit the federal government to dominate surface mining practices and controls in California.

The concern of the board is that federal legislation is very likely to be strongly influenced by attitude toward and experience with "strip-mining," as practiced in such coal-producing states as Kentucky, Ohio, and West Virginia.

In California, open pit operations such as those recovering borax at Kramer and those recovering rare earth minerals at Mountain Pass—both in the Mojave Desert—are so different that controls applicable to coal would be wholly inapplicable to these California deposits.

It is essential, therefore, that the State of California maintain local jurisdiction in these problems.

STATE OF CALIFORNIA—RESOURCES AGENCY,
DEPARTMENT OF CONSERVATION,
Sacramento, Calif., April 18, 1968.

Hon. STEWART L. UDALL,
Secretary of the Interior,
Washington, D.C.

DEAR MR. UDALL: Governor Reagan has asked me to reply to your letter of March 15 with which you transmitted a draft copy of the "Surface Mining Reclamation Act of 1968".

This proposed legislation speaks to a situation that already has received legislative and executive attention.

In 1967, the Legislature adopted Senate Resolution 134, see copy attached. In response to that, the Senate Committee on Natural Resources has been in close touch with the State Mining and Geology Board for the purpose of determining whether a need exists for controls at the State level.

The introduction of the Federal legislation places a certain degree of urgency in the deliberation of that Board. As a matter of record, the question of surface mining regulations received considerable discussion at the April 8 meeting of the Mining and Geology Board, after members had reviewed the pending Federal bills as well as a digest and commentary supplied by the American Mining Congress.

The Board took the specific action, unanimously, of going on record as not approving any legislation that would permit the Federal Government to dominate surface mining practices and controls. This action, set forth in a position statement, has been approved by the Administrator, The Resources Agency, as representing the State's position at this time. A copy of the position statement is attached for your information. Mr. Edgar M. Gillenwaters, Deputy Director, Department of Finance, stationed in Washington, D.C., also has been informed of this statement in order to advise California congressional representatives.

The operative word in the position statement is "dominate". It is hoped that should the proposed Federal legislation be successful, the actions by the Secretary in reviewing the state plans for approval, particularly the plan that would be submitted by California, will be such as to eliminate any question of Federal "domination" in this field.

Sincerely yours,

JAMES G. STEARNS, *Director.*

By Senator McCarthy:

SENATE RESOLUTION NO. 134, RELATING TO AN INTERIM STUDY OF STRIP MINING

Resolved by the Senate of the State of California, That the Senate Committee on Rules is hereby requested to assign to an appropriate committee for study the subject of uniform controls and standards for strip mining and to direct such committee to report thereon to the Senate not later than the fifth legislative day of the 1968 Regular Session of the Legislature.

Referred to Committee on Rules.

Senator METCALF. Letters have been received from interested parties to the legislation. They, along with any additional communications, will be included in the hearing record at this point.

(The letters referred to follow:)

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D.C., May 10, 1968.

Hon. HENRY M. JACKSON,
Chairman, Interior and Insular Affairs Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR JACKSON: The Chamber of Commerce of the United States takes this opportunity to comment on S. 3132, the proposed "Surface Mining Reclamation Act of 1968." It is requested that this letter be made a part of the hearings record which was made earlier this month.

The Natural Resources Committee of the National Chamber, of which I serve as Secretary, has been following the developments of this legislation and has had an opportunity to review and study it as well as to study the testimony which has been presented to your Committee. As a result of this continuing study, the National Chamber recommends to you and the members of the Senate Interior and Insular Affairs Committee that the bill be rejected.

S. 3132 should be opposed for three basic reasons: (1) local and state governments are constitutionally responsible for regulating land use, not the Federal Government; (2) the facts indicate that there is no need for the Federal Government to preempt the field of land conservation and reclamation; and (3) there is reason to believe that the proposed formula for federal-state cooperation, although reasonable, would be improperly administered by the Department of Interior, as is the case with the Water Quality Act of 1965.

Surface mining can leave an ugly scar and bring damage to the environment. It can also bring tremendous benefits to the people of America. With new mining machinery and surface mining techniques, the United States is the largest producer of metals and fuels in the free world. However, because the higher grade mineral deposits are rapidly being exhausted, the mining companies, in an effort to maintain the Nation's competitive position, are being forced to develop lower and lower grade resources. This, coupled with rising labor costs, indicates that there will be more, instead of less, surface mining activity.

Wise conservation and reclamation programs have been and are being established by industry and local and state governments to protect the environment. As surface mining expands these conservation and reclamation programs will expand.

Due to the desperate days of World War II, many acres of land were stripped of their resources and abandoned without any effort to reclaim or develop them. This Nation will someday have to reclaim those lands. Secretary Udall testified, however, that due to the economic condition of the country he could not justify setting as a priority the reclamation of those old surface mined lands. Secretary Udall presented a convincing argument on this point.

But, in any event, S. 3132 would affect only those areas mined on or after its passage. Consequently, few, if any, of the 2 million acres reported by the Department of Interior as disturbed lands that need additional reclamation would come under the provisions of this bill. Putting the matter in proper perspective is difficult because of the emotionalism that has characterized discussion of this legislation. The fact is that only 0.14 percent of the total land of the United States is even claimed to have ever been disturbed by surface mining. One third of this 0.14 percent has been adequately reclaimed, some is presently being actively mined, and another portion needs attention according to the Department of Interior. But, little, if any, as mentioned above, would be reclaimed as the result of this bill. This bill purports to be prospective and will not satisfy the desires of those who would like to reclaim the lands disturbed by past mining.

Today, mining companies and local and state governments, for the most part, recognize the need for responsible conservation and reclamation programs and are, in fact, doing an outstanding job. The National Chamber has consistently supported the proposition that local and state governments be responsible for regulating land use. Any deviation from this principle without showing a justifiable need would bring into question several constitutional issues that could conceivably hamper existing programs for reclaiming surface mined lands.

Local zoning laws and state reclamation laws now in existence properly control the vast majority of lands being mined. Ninety percent of the coal obtained from strip mines comes from the 14 states with effective reclamation laws. Sand and gravel operations, by reason of market conditions, must be located "close in." Consequently, most are rigidly controlled by city or county zoning ordinances which prescribe, in detail, how the operation must be conducted and how reclamation must be performed.

According to the Department of Interior's special report on *Surface Mining and Our Environment*, 75 percent of the land that has been disturbed by surface mining was mined for coal, sand and gravel and stone. These operations are now well regulated by state and local laws. The remaining 25 percent of the acreage disturbed by surface mining was for the recovery of resources such as phosphate and hard minerals. The Florida phosphate lands are being turned into beautiful forests and citrus groves. Some of the open pit mining operations defy reclamation in the traditional meaning, but can demonstrate that mining activities in some instances provide interesting and scenic values of grandeur.

Whenever and wherever possible, mined out lands should be reclaimed. This is a responsibility of the mining industry and local and state governments. More needs to be done, and will be done, but the fact remains that a realistic effort is being made. There is no *need* for the Federal Government to intervene.

S. 3132 would require the states to prepare a state plan for the regulation of surface mines and the reclamation of surface mined areas and submit it to the

Secretary of Interior for approval. If states do not comply with this requirement, or the state plan, in the opinion of the Secretary, is defective, or if after a continuing evaluation the Secretary determines a state is not complying with the approved state plan, the Secretary may initiate federal regulations for surface mining and surface mining reclamation in that state.

The rationale for this approach is stated in Section 3(d) of the proposed bill, which reads: "because of the diversity of terrain, climate, biological, chemical, and other physical conditions in mining areas, the establishment of a nationwide basis of uniform regulations for surface mining operations and for the reclamation of surface mined areas is not feasible." The rationale is sound, reasonable and logical. It backs up an approach that should be supported by those who believe that states must play an active role if our Federal form of Government and its checks and balances are to be preserved.

In fact, the National Chamber did support just such an approach in 1965 when Congress enacted the Water Quality Act. It was the same formula, the same expressed intent of Congress and almost the same language.

Unfortunately, the Secretary of Interior is not administering the Water Quality Act with the same understanding that is so clearly spelled out in the Act. Uniform federal standards are being demanded before state standards are approved—one state is being played against the other. Confusion reigns. It is now ten months after all the states have submitted their plans for implementing state water quality standards—not one state has had its plan approved 100 percent. All approvals are "conditional." Conditional upon acceptance by the states of certain language that will provide "equal"—uniform—standards for the state plans.

Based upon the experiences the states are now having with the Department of Interior in submitting plans for the Secretary's approval, it is apparent that more restrictive guidelines must be included in any legislation if the intent of Congress is to be properly reflected in the administration of such legislation. For your information and the record, attached is a letter of opinion from the Washington, D.C. law firm of Covington & Burling which clearly states that, in their opinion, the Secretary of Interior is acting beyond the scope of his authority in considering for approval state plans submitted to him under the provisions of the Water Quality Act of 1965.

For these reasons the National Chamber opposes S. 3132 and urges the Senate Interior and Insular Affairs Committee to reject the bill.

Sincerely,

JAMES G. WATT,
Secretary, Natural Resources Committee.

WASHINGTON, D.C., *April 4, 1968.*

MR. JAMES G. WATT,
Secretary, Natural Resources Committee, Chamber of Commerce of the United States of America, Washington, D.C.

DEAR MR. WATT: You have requested our opinion whether the Secretary of Interior is authorized to determine that State water quality standards are not consistent with the Federal Water Pollution Control Act on the ground that they fail to include (1) an effluent standard relating to the quality of matter permitted to be discharged into interstate waters, or (2) a uniform standard of "nondegradation" as published by the Secretary.

In our view the answer to both parts of this question is No. The Secretary has no authority under the Federal Water Pollution Control Act, as amended by the Water Quality Act of 1965, to insist that a State include in its water quality standards applicable to interstate waters either an effluent standard—such as an absolute requirement of secondary treatment or its equivalent—or a requirement that waters whose existing quality is better than the established standards will be maintained at their existing high quality.

The express policy of Congress in enacting and amending the Federal Water Pollution Control Act was "to recognize, preserve, and protect the primary responsibilities and rights of the States in preventing and controlling water pollution," and under the Act it is the initial right and responsibility of each State to adopt, after public hearings, water quality standards applicable to interstate waters within or on its borders. If the Secretary of the Interior determines that a State has adopted water quality criteria and an enforcement plan that are consistent with the Act, such State criteria and plan thereafter become the water quality standards applicable to the interstate waters within the State.

If the Secretary were to disapprove a State's water quality standards for their failure to include either an effluent standard or a nondegradation requirement, and then to promulgate standards applicable to the interstate waters of that State which included these requirements, the State would be entitled to a public hearing before an independent Hearing Board. In our view the Hearing Board would be obliged, as a matter of law, to recommend the elimination of these requirements from the standards promulgated by the Secretary, and the Secretary would be obliged to promulgate revised standards of water quality in accordance with the Hearing Board's recommendation.

This letter sets forth in summary form the basis for these conclusions, which are further elaborated with citation to the legislative history and other relevant authorities, in the accompanying memorandum.

WATER QUALITY STANDARDS MUST RELATE TO THE QUALITY OF THE RECEIVING STREAM

Both the language and the legislative history of the 1965 amendments to the Act make it clear that Congress intended that water quality standards prescribe the quality of the waters into which effluent is discharged, rather than the quality of the effluent itself, and that such standards must relate to the use and value of the receiving body of water.

Section 10(c)(1) provides for the adoption of "water quality criteria applicable to interstate waters or portions thereof within such state"—clearly a reference to the quality of the receiving waters. Water quality standards must meet the requirements of section 10(c)(3), which provides that in establishing such standards States, the Secretary, and Hearing Boards must take into consideration the use and value of interstate waters for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial and other legitimate uses. This emphasis on the use and value of the receiving waters is fundamental to Congress's insistence upon local standards that relate directly to the quality of these waters.

The sole means for Federal enforcement of water quality standards is set forth in section 10(c)(5), which provides that the "discharge of matter into such interstate waters or portions thereof, *which reduces the quality of such waters* below the water quality standards established under this subsection . . . is subject to abatement. . . ." (Emphasis added.) No violation occurs until it can be shown that the quality of the stream has been reduced below the level prescribed in the standard for that stream.

The fact that the Water Quality Act requires that water quality standards apply to the stream rather than to the effluent is the result of the deliberate decision by Congress to reject the approach taken in the initial Administration proposal, which would have authorized both stream standards and controls reading directly on the effluent. On the basis of testimony at the first hearings on the bill, the Senate Committee removed the provision for effluent standards, and it never reappeared through enactment.

Thus, both the statutory language reading explicitly in terms of stream standards, and the Congressional refusal to provide for effluent controls, make it clear that the Secretary of the Interior has no authority to insist on the inclusion of an effluent criteria in State water quality standards as a necessary condition for their approval under the Act. More particularly, the insistence by the Secretary that States include within their water quality criteria a uniform requirement of secondary treatment or its equivalent, without regard to whether such treatment is necessary to achieve compliance with the applicable stream standards, is beyond the Secretary's statutory authority.

In many instances municipalities and companies may have to install secondary treatment or its equivalent if they are to prevent the discharge of matter which reduces the quality of interstate streams below the applicable water quality standards. Failure to install secondary treatment in those instances would result in a violation of both Federal and State law.

But an across-the-board requirement of secondary treatment or its equivalent without regard to the water quality standards applicable to the interstate waters in question is contrary to the Congressional intent and the statutory language. If, after the adoption of water quality standards based on particular uses and values of an interstate stream, a municipality or a company finds that it need not install secondary treatment in order to prevent the discharge of matter that would reduce the quality of the stream below such standards, then there is no basis for requiring such treatment or for taking Federal enforcement action for failure to install it.

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THE LACK OF A STATUTORY BASIS FOR A NONDEGRADATION STANDARD

A somewhat different question is raised by the attempt of the Secretary to insist that every State water quality standard include a provision to require that waters whose existing quality is better than established standards as of the date on which such standards become effective will be maintained at their existing high quality. The Secretary has stated that the lowering of the quality of such waters would be permitted only upon a determination by the State water pollution control agency and the Department of Interior that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in, such waters. Any new or increased source of pollution to high quality waters would be required to provide "the highest and best degree of waste treatment available under existing technology."

Such a "nondegradation" standard cannot be justified under the provisions of the Act. First, in adopting water quality standards, State authorities must consider, on the evidence presented at public hearings, whether the quality of a particular stream should be improved in order to permit uses not now possible, whether the standards should reflect the existing level of water quality because it satisfactorily accounts for desired uses and values of the stream, or whether standards should be set at levels below the existing quality level in order to accommodate uses and values of importance to the citizens of the State and consistent with purposes of the Act. A nondegradation standard would in effect override any stream standard in this last category, for it would purport to require a water quality level above that specified in the standard. There is no basis in the Act for the Secretary summarily to disregard the decision of the State authorities, and to impose a general requirement unrelated to the hearing evidence.

State standards must of course meet the general requirements of section 10(c)(3) "to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act." Presumably the nondegradation standard is thought to be justified as a means to "enhance the quality of water," but such a narrow reading of this one provision ignores the statutory purpose "to enhance the quality *and value* of our water resources," and in effect nullifies the requirement that the Secretary and the State take into consideration the "use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses." If the hearing record establishes that maximum value and use of a stream can be achieved by water quality standards somewhat below existing levels, then the Secretary cannot arbitrarily refuse to give effect to such standards.

A second difficulty with a general nondegradation standard is that it purports to impose an unenforceable requirement. A Federal action for failure to observe water quality standards can be maintained only upon a showing that discharged matter reduced the quality of the receiving stream below the standards adopted for that stream. No action would lie under the Act for the discharge of matter that merely reduced the stream quality below earlier quality levels, if the stream continued to meet the requirements of the standards themselves.

A third objection to the Secretary's nondegradation standard is that it seeks to displace the initial responsibility of the State to establish water quality standards and to prevent and control water pollution. Under the nondegradation standard, permission to lower the quality of "high quality" waters would be granted only upon a showing of justification made to the State *and* the Secretary. But the Act carefully prescribes the role of the Secretary in the establishment and enforcement of water quality standards, limiting his authority to the approval of State standards, the promulgation of standards if State standards are not consistent with the Act, and the initiation of court enforcement proceedings. He has no statutory authority to require prior Federal approval of discharges into a stream or of treatment facilities.

Finally, the requirement that new or increased pollution of "high quality waters" can be permitted only if the installation will have the highest and best degree of waste treatment available under existing technology is an attempt to write effluent standards into the Act, and to impose a degree of treatment that is inconsistent with the enforcement tests of "practicability" and "physical and economic feasibility." A treatment method that is technically available may well be impracticable and totally unfeasible economically. Under any circumstances, a violation of the Act must be predicated on discharge that reduces the quality of

the receiving waters below the stream standard, and not on failure to install any particular type or degree of treatment facility.

For these reasons, we conclude that the Secretary has no authority to require that States adopt either effluent or nondegradation standards as a condition of receiving approval of water quality standards under the Federal Water Pollution Control Act.

Very truly yours,

COVINGTON & BURLING,
By EDWARD DUNKELBERGER.

NATIONAL WILDLIFE FEDERATION,
Washington, D.C. April 30, 1968.

Hon. HENRY M. JACKSON,
Chairman, Senate Committee on Interior and Insular Affairs, New Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: The National Wildlife Federation should like to comment briefly upon S. 217, S. 3126, and S. 3132, proposals to regulate strip-mining, and have this letter be made a part of the current hearings in which public reaction is invited.

By way of identification, the National Wildlife Federation is a private conservation organization composed of independent affiliated groups in 49 States. These affiliates, in turn, are composed of local clubs and individuals who, when combined with associate members and other supporters of the National Wildlife Federation number an estimated 2½ million persons.

The National Wildlife Federation long has deplored the natural resources problems created as a result of strip-mining. A resolution adopted in 1965 (copy attached) outlined the problems of soil mismanagement, erosion, stream pollution, and fish and wildlife losses caused by these practices. It also pointed to encouraging projects to reclaim and enhance these areas, and called for extensive studies leading to the development of suitable remedial actions. We believe the bills under consideration by the Committee would help set the necessary remedial actions into motion, if enacted.

We have been encouraged at the interest shown in attacking the problem, both by the Congress and by Executive Branch agencies as well as the President himself. And, we have been elated at actions taken in some States, notably Pennsylvania and Kentucky, to establish controls. These bills, particularly S. 3132, in our opinion, would make significant advances in strip-mining control.

The National Wildlife Federation supports these principles, as expressed in S. 3132:

1. The Congressional declaration that surface mining, while important to the Nation's economy, is harmful in many respects and must be regulated.
2. The Federal Government be authorized to provide both technical and financial assistance to the States in developing and enforcing adequate State control plans.
3. The Federal Government, if a State has not developed a suitable control program within three years, shall issue Federal regulations for surface mining operations in that State.

It is our understanding that less than one-fourth of the States have laws to regulate surface mining and some of these are ineffective. Obviously, more are badly needed. While we believe the States should be given a chance to put their own house in order, it is necessary for the Federal Government to step in if no action is forthcoming. This procedure has been followed with respect to both water and air pollution control and there is every reason to apply it to strip-mining as well.

We believe the establishment of advisory committees can serve a beneficial purpose.

In our opinion, S. 3132 does not do the complete job. It does not lay sufficient stress on reclamation of previously mined areas, including those under private ownership which are abandoned. Therefore, we recommend that the Committee give serious consideration to the provisions in both S. 217 and S. 3126 which would authorize cooperate agreements and financial assistance for the reclamation and conservation of previously mined lands owned by private individuals. Possibly, land treatment procedures employed by the Department of Agriculture could provide useful vehicles for the installation of suitable vegetative cover practices. And, the Committee may even wish to give thought to Federal acquisi-

tion of mined-out areas for the purpose of reclamation. Many of these scarred lands have been converted into useful public recreational locations.

Thank you for the opportunity of making these observations.

Sincerely,

THOMAS L. KIMBALL,
Executive Director.

[Attachment]

RESOLUTION NO. 8 OF NATIONAL WILDLIFE FEDERATION, 29th ANNUAL CONVENTION, WASHINGTON, D.C., MARCH 5–7, 1965

STRIP MINING

Whereas, strip mining, the practice whereby mineral deposits are reached by removal of the land surface, causes serious problems of soil erosion and pollution of streams by acids and silt; and,

Whereas, newly-developed equipment now in use affects vast acreages of lands and magnifies these difficulties; and,

Whereas, unless conservation and restoration methods are employed, the scarred and denuded lands remain unsightly and unproductive for years; and,

Whereas, demonstrations by cooperative mining operators and governmental officials prove that commendable reclamation and restoration of mined-over lands can result in the creation of desirable fish and wildlife habitat; now,

Therefore be it resolved that the National Wildlife Federation, in annual convention assembled March 7, 1965, in Washington, D.C., urges the initiation of studies by the Department of the Interior of the methods used in strip mining operations and their extent in the U.S. with a view toward recommending remedical programs leading to reclamation and restoration of the land surface and elimination of stream pollution from these sources.

WILDLIFE MANAGEMENT INSTITUTE,
Washington, D.C., May 10, 1968.

Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs, Senate Office Building, Washington, D.C.

DEAR SENATOR JACKSON: The Institute regrets that it was unable to have a representative appear before the committee during the public hearing on S. 217, S. 3126, and S. 3132. We note that the hearing record was left open for the receipt of statements, and we would appreciate having this letter made a part of that record.

The Institute strongly supports appropriate federal legislation to protect the public values in lands that have been and are susceptible to various kinds of contour and open strip mining. It is believed that the legislation should not diminish in any way the several good state laws already in effect. Rather, it should uphold and sustain those state laws while, at the same time, provide guidance and leadership to states lacking effective laws and programs.

Federal legislation, in our opinion, should respond to at least three oversights that have been responsible for destructive strip mining practices in many localities. It should call for the pre-planning of rehabilitation of the lands to be stripped or open mined, require that rehabilitation takes place in conjunction with and at the time of the mining operation, and contain authority for prohibiing such mining where land rehabilitation is impossible or where slope, environmental values, or other factors render it inadvisable.

It is hoped that the federal responsibility can be vested jointly in the Departments of the Interior and Agriculture. As now organized, neither agency currently has all of the expertise to provide the technical and other services that are required to effectuate an adequate program. We believe, too, that the committee's bill should make provision for restoring the nearly 1 million acres that have been disrupted by contour strip coal mining operations in the past. Failure to restore these lands will perpetuate currently undesirable conditions.

In addition, the Institute wishes to associate itself with the remarks of Mr. Grover C. Little, Jr., executive director of the West Virginia Division of the Izaak Walton League of America, in his appearance before the committee. We believe that the 16 "strong points" recommended by Mr. Little for inclusion in applicable state and federal laws warrant the committee's most favorable attention.

I wish to thank the committee for this opportunity to comment on the bills that are under consideration. We believe that legislation is needed in this area and are hopeful that an adequate measure can be enacted.

Sincerely,

C. R. GUTERMUTH, *Vice President.*

LAW OFFICES,
SULLIVAN, MCMILLAN, HANFT & HASTINGS,
Duluth, Minn., May 3, 1968.

Re S. 3132, Surface Mining Reclamation Act of 1968.

Hon. LEE METCALF,
Senate Committee on Interior and Insular Affairs, New Senate Office Building, Washington, D.C.

DEAR SENATOR METCALF: We were privileged on April 30 and May 1 to attend the hearings of your committee at the open hearing held in connection with S. 3132, S. 217 and S. 3126. We found this hearing to be very worthwhile, and I would like to express a short statement to your committee on behalf of the members of the Lake Superior Industrial Bureau, for whom I am counsel. This organization consists of the principal iron mining and taconite companies in Minnesota, including United States Steel Corporation, Reserve Mining Company, Erie Mining Company, Pickands Mather & Co., Jones & Laughlin Steel Corporation, Cleveland-Cliffs Iron Company, Eveleth Taconite Company, Snyder Mining Company, and others.

Your committee appeared to be considering most seriously S. 3132, and on behalf of these Minnesota companies we would like to go on record as endorsing in their entirety the statements made by Joseph A. Abdnor on behalf of the American Mining Congress, by Dr. S. W. Sundeen of Cleveland-Cliffs Iron Company, John Boentje of Pittsburgh Pacific Company, Hugo Johnson of the American Iron Ore Association and Minnesota Commissioner of Conservation, Jarle Leirfallom.

We are unanimously of the opinion that federal regulation of surface mining practices in the iron ore industry in Minnesota is both unnecessary and impractical. As stated by Commissioner Leirfallom, we think that the State of Minnesota should be given an opportunity to deal on a state level with such problems as may exist in this industry before we are subjected to the type of regulation proposed in S. 3132. We also submit, with all due respect to this proposal, that its enforcement—particularly with reference to taconite and small mining operations—could very well impose a bruden sufficient to harm those companies to the extent that their continuance might be difficult, and, as also stated by the various witnesses, give a great advantage to foreign ores, which are even now posing a serious competitive threat to this industry in Minnesota.

In the event your committee reports out this legislation without excluding the iron ore and taconite industry, we will be making every effort to bring our point to view of our Minnesota Senators, Eugene McCarthy and Walter Mondale, and are accordingly sending each of these gentlemen a copy of this communication. We are also addressing a copy of this letter to the Hon. John A. Blatnik, Member of Congress from this district.

Very truly yours,

RICHARD H. HASTINGS.

SPORT FISHING INSTITUTE,
Washington, D.C., May 21, 1968.

Senator HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs, Old Senate Office Building, Washington, D.C.

DEAR SENATOR JACKSON: The Sport Fishing Institute wishes to comment on the proposed legislation by the Congress which deals with the regulation of surface mining and the restoration of such mined lands. This is contained in S. 217, S. 3126, and S. 3132.

Mr. Chairman, few actions of man are more destructive of the earth's surface and man's compatibility with nature than that of strip-mining. Aside from the ugly and extensive physical scarring of the landscape, the pollutional results—in terms of erosion, silt, and acids unleashed on downstream areas—are often disastrous. The steam electric power industry apparently has an insatiable

appetite for low-grade coal, and the subsequent fairly recent shifts of hydro to fossil-fueled steam power generation has set in motion a remorseless rending of vast areas of coal-bearing lands covering large areas of many states. The latest report of "Fish Kills by Pollution, 1966", published by the Federal Water Pollution Control Administration in 1967, indicates that approximately 17 per cent of all reported fish kills were due to mining operations. When one considers the vast scope of pollution-caused fish kills that have been reported to the Federal Government such mining operations are the second greatest causative factor exceeded only by the food products industry.

Mr. Chairman, since World War II there has been a tremendous increase in the size and capacity of individual power generating units and stations. Such is fundamental to the continuing low cost of electricity to the consumer. We realize that the size factors are among the most important tools available to an electric utility in its constant effort to limit or offset the effects of the continuous and rapid increases in the cost of doing business these days. There very apparently is great economic justification for the overwhelming trend of the utilities toward the use of larger and larger generating units and stations. We have observed that some 72 per cent of the total generating capacity now in order in this country (both fossil and nuclear-fueled) number 134 turbine-generator units, and 500 megawatts and larger. This portends the considerably increased use of mined fuels to operate these power electric stations.

Nationwide it is estimated that approximately one million acres of land have been activated by coal strip mining and that this is increasing at a progressive rate between 20,000 acres per year to reach a rate of 30,000 acres per year by 1970. At a Strip-Mine Symposium held at Ohio Agricultural Experimental Station (Wooster) in 1962 the principal speaker was Dr. Wilhelm Knabe, Soil Scientist with the West German Federal Research Experiment Station for Forestry and Forest Products (Reinbeck). Dr. Knabe stressed that West German laws require the pre-planning of reclamation, their most important aspect being separate disposal of top soil in order to cover the soil banks after grading and providing basis for good crops.

There are many cases of fish kill resulting from mine pollution but one of the most devastating reported of sport fish in the State of Pennsylvania's history occurred on the north Branch of the Susquehanna River back in 1961. Fish Commission personnel estimated that at least 116,280 fish including 15,116 legal-sized walleyes and 14,053 bass were killed in a 55-mile stretch of the River. The State Sanitary Water Board determined that the lethal pollutants resulted from the pumping of mine acid wastes into the river by the Glen Alden Mining Corporation. A fine of $58,504.50 was assessed as proper payment for the fish killed.

The Tennessee Valley Authority sometime ago recognized the seriousness of its strip mining activities and initiated studies and experimental reseeding to restore stripped areas to productivity. They worked with experimental conifer planting on 10-acre stripped test plots (at the rate of 1,700 seedlings per acre) and found first year survival rates ranging from 39 per cent for short leaf pine to 84 per cent for Virginia pine. Ultimately they worked with five different species and found a 60 per cent survival rate. They also determined that grading improved the survival. They concluded that restoration methods must be refined and intensified but did hold considerable promise. Knowledge to accomplish the immediate large-scale directive action for reclamation of mined areas on the part of the strippers has been available. Extensive demonstration of such was undertaken about 17 years ago in southern Illinois as a cooperative project of the University of Southern Illinois, Sport Fishing Institute, Wildlife Management Institute, the Illinois Conservation Department, the Illinois Coal Strippers Association, and the Truax-Traer Coal Mining Company. Similar work has been done in Ohio, as well. Therefore, the public and coal-consuming public agency should not permit the alleged need for research to become a smoke-screen behind which operators can postpone or dodge rehabilitation. It is unfortunate that most of the coal strippers regard reclamation as a public agency responsibility. We believe that the operator should be forced by state or federal laws and terms of coal purchase contracts to revegetate and otherwise restore the lands. This could possibly raise the price of the coal but we feel it could be amply justified.

Mr. Chairman, the Sport Fishing Institute, for the reasons given above, feels that any of the proposed legislative measures that best will provide for the regulation of present and future surface and strip mining, and for the conservation, acquisition, and reclamation of surface and strip mine areas would be in

the greatest of public interest. Kindly include this letter in the record of hearings held on this matter.

Thank you.

Sincerely,

PHILIP A. DOUGLAS, *Executive Secretary.*

BLACK, MCCUSKEY, SOUERS & ARBAUGH,
ATTORNEYS AND COUNSELORS AT LAW,
Canton, Ohio, April 22, 1968.

Re mined lands conservation hearings.

Hon. FRANK J. LAUSCHE,
U.S. Senate,
Senate Office Building,
Washington, D.C.

DEAR SENATOR LAUSCHE: If it is permissible for the Senate Interior Committee to receive written letters of opinions and exhibits concerning pending bills for the protection and reclamation of land, I would appreciate your bringing this letter and enclosures to the Committee's attention. It is my intention to send additional photographs of mined areas here in Northeastern Ohio later this week.

This letter expresses my views as a citizen concerning the need for federal control of open mining operations based on my observations of such operations here in Eastern Ohio. I have resided in or about Tuscarawas County, Ohio, in excess of twenty-five years and have always considered this area to be one of the most scenic in the State. I have long been frustrated by the tragic defacing of the countryside in this and other areas of Ohio by open mining activities. While open mining is an inexpensve method of obtaning an energy source such as coal, it is also a method which is exacting a terrible price in terms of destroying the natural beauty of our country. Earthmovers now exist in Ohio that can shovel 180,000 tons of overburden in a single day (see enclosure), and they daily create high walls, sour water and piles of overburden which resist vegetation.

There is, I feel, a strong resentment among the general populace concerning this form of mining activity, but, regretably, this resentment is not organized. Even with recent enactments of legislation on open mining operations, Ohio's State government has failed to adequately regulate open mining. There are several reasons for this, but basically those who oppose this desecration of the countryside and the resulting pollution to our streams have been unorganized, while those who derive a direct short term benefit from such operations, such as the power companies and the mining companies, have exerted tremendous pressures on the state legislature with regard to mining and reclamation legislation. I am enclosing portions of the current Ohio Code governing reclamation of open mined areas by an open mining operator. On paper, the regulations governing the open mining operator appear very complete, but as a persoal viewing of the open mined areas of Ohio would reveal, these laws are not doing the job of protecting Ohio land from such operations. Enforcement provisions are woefully inadequate. Bond amounts required to be posted by the mining companies are too low and when a mining operation fails (which is not infrequent) or if the bond is forfeited for noncompliance, insufficient funds exist to reclaim the land used by the defunct mining company. If an operator elects not to cover the exposed coal vein by an impoundment of water in the final cut, he is required to cover the exposed coal seam with overburden, but the amount of overburden coverage which is required by the law and the regulations promulgated thereunder often is not adequate to prevent leeching of sour water from the mined area.

I am enclosing some pictures depicting open mining activity in York, Clay and Jefferson Townships, Tuscarawas County, Ohio, so that the Committee members who have not visited these areas of our State may see what is really happening here. No picture, and especially my amateur photography, begins to represent how ugly and useless the land really is which has been subjected to open mining operations and "reclaimed" according to the State's standards.

Eventually, I feel confident that the Ohio public will become sufficiently aroused to enact tough open mining and reclamation legislation and demand proper enforcement of the same, but based on the past performance of the Ohio legislature and governmental authorities, this legislation will not come until the real damage has occurred, as was the case in Pennsylvania.

The need for federal legislation for land protection and reclamation is one of the greatest of the people of the United States today, even though it is not

the most obvious. Areas of Ohio, having for several years been subjected to indiscriminate mining practices without proper control at the State level, will never be the same. We must preserve some of the natural beauty of this hill area of Ohio for posterity, and it must be acted upon now or be forever lost.

Some coal companies and power companies who engage in open mining activity are responsible and have made a genuine effort to reclaim mined lands. These companies naturally resist further governmental control of their industry, and have resisted it on the local, state and federal level and by appealing to the general populace through paid advertisements in large circulating magazines (see enclosures). While I commend these companies for their attitude toward land reclamation, I strongly oppose their efforts to limit legislation for the control of open mining activities, because I have personally witnessed the great need to control those companies who do not responsibly reclaim the land which has been subjected to open mining practices.

I have reviewed the bill prepared and submitted by you and it is my feeling that this bill and the one introduced by Senator Jackson and submitted to the Department of the Interior would be a great step forward in protecting our land. Legislation of this nature is desperately needed by the people of the United States.

Yours very truly,

VICTOR R. MARSH, Jr.

J. L. SHIELY CO.,
St. Paul, Minn., March 26, 1968.

Re S.3132.

Hon. WALTER MONDALE,
U.S. Senate, Washington, D.C.

DEAR SENATOR MONDALE: The J. L. Shiely Company is a sand, gravel and crushed stone producer operating principally in the Twin Cities Metropolitan area. We wish comment on our position regarding the "Surface Mining Reclamation Act of 1968."

We do not believe that the sand, gravel, crushed stone and related industries should be included in the provisions of this bill. Our reasons are as follows:

(1) The right to extract sand, gravel and crushed stone should be granted by the lowest governmental unit that is directly concerned with the extraction from an environmental standpoint. This is being done through local planning boardsand zoning commissions on a individual case basis. We feel that this is beneficial to both the community and the producer.

(2) In most cases, the products mined are being used within a relatively small area surrounding the pit or quarry. These products become an integral part of the economy of the community and the surrounding area. We feel that the community should have jurisdiction.

(3) Rehabilitation should be accomplished on a best use basis. In many cases there is no predictable best use at the outset of operations, and trying to come up with a plan would be a useless drawing board exercise.

(4) The economic considerations are important. We think that the provisions of this bill will cost the producer an unreasonable amount of money. This will have to be passed on to the consumer. The cost will be reflected in such projects as the Interstate Highway System.

You might be interested in knowing that our company voluntarily has developed a rehabilitation plan for our Grey Cloud Island complex. Public relations and community responsibilities prompted us to undertake this project. The engineering and planning cost was over $6,000.00. This Spring we are planting over 10,000 trees on reclaimed land at a cost of another $6,000.00.

We feel that our industry is responsible and not in need of inclusion in the provisions of S. 3132.

Very truly yours,

J. L. SHIELY, Jr., *President.*

WEDRON SILICA CO.,
Chicago, Ill., April 9, 1968.

Re S. 3132, Surface Mining and Reclamation Act of 1968.

Hon. ERNEST GRUENING,
U.S. Senate, Washington, D.C.

DEAR SENATOR: We have read with interest the very commendable provisions of this bill. We, however, would like to voice our most strenuous objection to the bill for the following reasons:

1. It is a duplication of already existing state plans that are in operation and which are most successful.

2. It would be another instance where the Federal government will usurp state rule and substitute its judgment for that of the state's.

We strongly feel that the citizens of the state, through their local government, are more than capable of handling their own internal affairs. It is further evident that the states, with the co-operation of industry, have implemented land reclamation acts of their own.

As in all bills implemented by the Federal government, funds, are proposed to pay for most of the cost—with the usual bureaus being established, the reams of reports, and, as always, additional payrolls.

The industrial sand industry, through its National Industrial Sand Association, has been a leader in the field of reclamation; and all of its member companies have co-operated and shown definite results. We feel that Federal legislation is totally unnecessary and at this time when the Federal budget needs a return to sanity, may we suggest that you direct your efforts toward reducing expenditures rather than increasing them.

Yours very truly,

FRANK E. GRECO, *Secretary-Treasurer.*

PACIFIC CEMENT & AGGREGATES,
San Francisco, Calif., April 12, 1968.

Subject: Surface Mining Reclamation Act of 1968, Senate hearing scheduled, April 30 and May 1.

Senator HENRY M. JACKSON,
Senate Office Building,
Washington, D.C.

DEAR SENATOR JACKSON: We support the action of the Board of Directors of the National Sand and Gravel Association who recently adopted the following association policy in regard to legislative proposals for Federal Control of mine reclamation:

"That the Association is opposed in principle to *direct* Federal control of reclamation in the sand and gravel industry; in the event that the enactment of such legislation seems probable, however, efforts should be made to assure the reasonableness and administrative workability of such legislation, the protection of the public interest in the maintenance of sand and gravel reserves, and the avoidance of a multiplicity of regulatory sources."

Respectfully yours,

GRAY MINOR,
Director of Public Affairs.

DEL MONTE PROPERTIES CO.,
Pebble Beach, Calif., April 3, 1968.

Hon. THOMAS H. KUCHEL,
Old Senate Office Building, Washington, D.C.

DEAR SIR: We at Del Monte Properties Company are quite concerned with some of the provisions included in Senator Jackson's bill S. 3182, entitled: "Surface Mining and Reclamation Act of 1968".

As you know, we own a considerable acreage of some of the most beautiful country in the world and we are justifiably proud of how it has been and how it will be developed.

Included in the acreage are various areas in which we have mined sand and which are now depleted. Other areas are presently being mined and which, at some future date, will also be depleted.

After depletion, these areas will revert to very valuable real estate, but at this date there is no way of predicting the manner in which they will be developed. Will these parcels be reserved for single family dwellings, hotels, motels, or golf courses?

As a case in point, I refer to one depleted deposit upon which mining was started some fifteen years ago. Who at that time could foretell that this area would now contain four or five holes of the famous, or infamous, Spyglass Hill Golf Course?

Our big objection to this bill is the requirement that states, "Provide for the reclamation of surface mined areas. Including the posting of an adequate performance bond which will insure that the entire cost of reclamation will be covered."

One inland area which we are now mining contains reserves to last about 80 years at our present mining rate. To post a performance bond for its proper reclamation, it seems to us, is an undue hardship. It's ultimate and final manner of development is unknown at this time.

We certainly believe in conservation and the theory behind the bill, and the esthetic manner in which we have developed our lands over the years bears this out.

We do feel, however, that when companies, by past performances, have shown good records of land reclamation and subsequent development, or when, by the very nature and future value of the depleted areas which would force reclamation and development, such companies should be exempted from the posting of performance bonds.

Your consideration to the points brought out in this letter will certainly be appreciated.

Very truly yours,

HUGH H. BEIN.

GLENDIVE CHAMBER OF COMMERCE,
Glendive, Mont., May 14, 1968.

Senator LEE METCALF,
Senate Office Building, Washington, D.C.

DEAR SENATOR METCALF: The Legislative Committee of the Glendive Chamber of Commerce respectfully urges you to support S. B. 3132 since strip mining will become increasingly important in our area.

Sincerely,

ROGER SMITH,
Vice Chairman, Legislative Committee.

LAKELAND LEDGER,
Lakeland, Fla., May 2, 1968.

Senator LEE METCALF,
Senate Office Building, Washington, D.C.

DEAR SENATOR: Stewart French, Chief Counsel, Senate Interior and Insular Affairs Committee, asked me to send you the in-depth study The Ledger did based on a report by one of Florida's foremost water authorities. Lamar Johnson, an engineer who specializes in water use, reports that the 200 million gallons of water a day pumped by the phosphate industries from the aquifer are draining the lakes of Polk County. Three lakes in Lakeland are now barren.

While I can thoroughly appreciate the enormous contribution of the phosphate industry to Polk County, I feel they must still at the same time maintain themselves as responsible corporate and community citizens.

The story speaks for itself. We'll be glad to further research any facts which you wish.

I am sincerely,

JOHN R. HARRISON, *President.*

[From the Ledger, Lakeland, Fla., Apr. 28, 1968]

POLK LAKES ARE "DOOMED"—PHOSPHATE SAID PRIMARY CAUSE

(By W. D. Shilling, Ledger staff writer)

The lakes of Lakeland are dying slowly.

So, too, are the lakes of Auburndale, Winter Haven, Haines City, Lake Wales—all of Imperial Polk County.

Rainfall, normal or even above normal, will not save the lakes.

The big villain in the story of doom is the phosphate industry.

Secondary villains are the citrus industry and electric power plants, such as the City of Lakeland's generating facility on Lake Parker.

Only drastic action in water conservation will save the lakes.

These are the considered views of Lamar Johnson, of Lakes Wales, consulting engineer and one of Florida's foremost authorities on water.

"We have got to do something quickly," Johnson said. "If we lose our lakes, a lot of people will be hurt. The people know that something is wrong, but they don't know what it's all about.

"When they learn the facts as they are, the people of Polk County will really raise hell."

From his home on the hillside leading to Bok Tower, Johnson pointed a finger towards Big Lake Wales, outlining where the water line of the beautiful body of water used to be—"it has fallen 10 feet in the past 7 years."

"When Dick Pope starts water skiing on mud flats at Cypress Gardens, we will have something done," the engineer commented.

Johnson conceded that his views on the ultimate disappearance of the lakes of Polk would shock the people, but he said the time has come when the people need to be shocked.

Johnson will retire on June 1 from the Peace River Basin Board of the Southwest Florida Water Management District. He has served since 1959.

Before becoming an independent consultant, he was the chief engineer for the Central and Southern Florida Flood Control District, and prior to that assignment, he was the chief engineer for the old Everglades Drainage District.

The Lake Wales water specialist isn't alone in his grave concern over Polk County's dwindling water supply.

The United States Department of the Interior Geological Survey reported this year that the water supply situation in Imperial Polk is the most critical of any area in Florida.

In its 1968 analysis, the USGS said that the groundwater levels compared with January average levels in the Florida aquifer are 20 to 40 feet below normal.

Johnson says that the USGS report is charitable—that in actuality the groundwater levels are down 50 or more feet since 1934.

How many years of life do lakes of Lakeland and Polk have remaining before they become mud flats and sand beds?

The engineer said he could not give a precise answer. Heavy rains will lift the lake levels by several feet but in time the tables will resume their gradual decline. The rate of pumping from the underground aquifer will be the all-important factor. Tremendous gallonage is now being pumped from the underground reservoir, and the rate of consumption by industry and agriculture is rising substantially. Nature cannot replenish the aquifer as fast as the water is being pumped out.

But Johnson points out that the death process is already advanced for some lakes in Polk. He mentioned specifically Stall Lake and several smaller lakes at Alturas and Lake Bonny and Crystal Lake in the Lakeland area. He said:

"Stall Lake once was one of the most beautiful lakes in the county. The last time I was over there, several years ago, it was nothing more than a couple of mud holes. The smaller lakes are gone."

The heavy pumping of the phosphate industry is a prime reason for Johnson's contention or prediction that, without drastic conservation measures, the lakes of Lakeland and Polk in an undetermined number of years will disappear.

He said that the phosphate industry states that it uses 10 per cent "fresh" water and 90 per cent recirculated water in its mining and processing operations.

"Fresh" water is water pumped from the aquifer, and Johnson says that the industry's 10 per cent figure represents 200 million gallons per day.

That's 73 billion gallons of water in a 12-month period.

Johnson notes, however, that the U.S. Bureau of Mines reports in its official publications that the phosphate industry uses 30 per cent "fresh" water in its operations.

If the federal agency is correct, the phosphate industry pumps from the underground reservoir 600 million gallons per day—219 billion gallons of water per year.

"I can't prove whether the 10 per cent or the 30 per cent figure is correct," the engineer said. "In either case that kind of pumping creates a tremendous hole in the ground."

The "hole in the ground" is the area underneath the surface which was filled with water before the advent of heavy pumping. In technical language, the hole is called a "cone of depression."

The "cone of depression" in Polk, Johnson said, was begun in the Bartow-Mulberry-Ft. Meade area. In time it extended under Greater Lakeland and then eastward to the Ridge section.

The "cone" already extends into Hardee, De Sota and Hillsborough Counties, Johnson said, and it is working its way into Northeast Polk, little affected to date because of its nearness to the Green Pond recharge area.

On the "cone of depression" existing under the citrus-rich Ridge district, Johnson pointed anew to Big Lake Wailes, where the water line has far receded from its position of a decade ago.

The rainfall deficiency of the past seven years isn't the reason for the drop in the water table in this lake, the engineer commented. He explained that Big Lake Wailes has had enough rainfall, plus runoff from a drainage area five times the size of the body of water, in the past seven years to offset losses from evaporation.

"Theoretically, Lake Wailes should not have lost ground in these past seven years. This isn't a pot-hole lake. It benefits from surface runoff. Yet the table has declined from 115 feet above sea level to 104.8 feet a month ago—a loss of more than 10 feet in the water level in only seven years.

"Because of the heavy pumping from the underground aquifer," Johnson said, "we have upset the delicate balance created by nature over a period of many years in respect to our lakes.

"Our lakes are leaking (because of the withdrawal of the ground water beneath the surface) and we are going to lose most of these lakes in our Ridge section."

Johnson does not point the finger to the phosphate industry alone as the sole heavy pumper of underground water. The second villain is in citrus production and processing.

The engineer said that reliable figures on the gallonage of water pumped from the aquifer for grove irrigation and citrus processing are not known, but that the gallonage is substantial.

The Citrus Experiment Station at Lake Alfred reports that an aveage of one foot of water per acre (325,850 gallons) per year is needed for irrigation. The U.S. Department of Agriculture reports that 1.95 acre feet of water per acre is used for citrus irrigation under average conditions in West Central Florida.

The USGS states that 82 per cent of the water used for citrus irrigation comes from the underground storage aquifer—the balance from surface water sources, i.e., lakes.

The water-use for citrus has increased from about 20 billion gallons per year in 1956 to 52 billion gallons per year in 1965 and the Soil Conservation Service predicts that the water demand in the five-county area comprising the Peace and Alafia River basins will climb to 125 billion gallons per year by 1980.

Add the present citrus water consumption and the increased gallonage anticipated by 1980 to present demands of the phosphate industry and its future projected needs and Johnson's dire outlook on the lakes of Polk dying appears to be all too realistic.

The Florida Board of Conservation cites that four billion gallons of ground-water is needed to produce a million long tons of phosphate. From 1934 to 1965, ground-water consumption by the phosphate industry soared from eight billion gallons per year to 72 billion gallons in 1965.

Polk County has the highest industrial use of water of any county in Florida. The Florida Board of Conservation says that this peak demand reflects the phosphate and electric power generating industries within the Peace and Alafia River basins.

"Total industrial water use in Polk County was reported at 133.5 billion gallons per year in 1962," the USGS stated. "The Florida Board of Conservation projection to 1980 indicates an industrial water use of 316 billion gallons per year."

Johnson said that the future salvation water-rise of Polk and its lakes depends on severe conservation in the areas of phosphate, citrus and electric power production. (Municipal water use accounts for less than 10 per cent of the total pumped from the aquifer.)

"The phosphate industry in North Africa's desert operates with only a little salt water," he said. "We need to get our phosphate industry to recognize the problem and to take the steps necessary to change its mining-processing processes. It needs a closed water system—taking only enough of the ground water supply to replace the loss by evaporation. It is entirely feasible.

"The citrus industry needs to know much more about its irrigation needs. I am not suggesting that some irrigation isn't needed. We need to have better guide lines than the three o'clock wilt to know when to irrigate and how much to irrigate. Certainly, irrigation should at least be at night when the humidity is high, when the wind is low, when evaporation can be held to a minimum. I do suggest that we need to irrigate most beneficially.

"Large quantities of ground-water are used for cooling generators in electric power plants. Just because it is easy to get and because the ground-water temperature is low. We should be looking at this real hard. Power plants can be built that use almost no water.

"The big companies are now locating on the ocean front, like Florida Power at Crystal River. They are using salt water. The companies are smart enough to know that this foolishness of wasting fresh ground-water can't go on."

Johnson can cite facts and figures by the hour to validate his assertion that, barring drastic action in the near future, the lakes of Lakeland and Imperial Polk will die.

The mere assumption seems unbelievable, fantastic. Johnson, a scientific man with axes to grind, concedes that the prediction is all too real, that the hour is already late, much too late.

As an engineer who has spent many years of his life studying the water of Florida, Johnson's hope is that the people will heed the alarm and rise up in righteous anger.

What else will solve the dilemma? What else will save the lakes? Or will the day really come when scrawny corn or weeds will be growing in the acres that once were this county's lakes . . . will the day really come when Dick Pope will be skiing on mud flats at beautiful Cypress Gardens?

History, unfortunately, has recorded civilizations which flourished and then died when once lush acres were turned into arid wastes . . . when the water had come and gone.

DEL MONTE PROPERTIES CO.,
Pebble Beach, Calif., April 25, 1968.

Hon. THOMAS H. KUCHEL,
Old Senate Office Building,
Washington, D.C.

DEAR SIR: As requested in your recent letter, I am elaborating somewhat on the points I raised in my last letter to you.

I would appreciate having you enter into the records the text of this letter.

For many years the National Industrial Sand Association has stressed to their members the great necessity for public relations, with special emphasis being placed on the rehabilitation of depleted lands. Many publications have been issued, at considerable cost, suggesting ultimate land use and, in many instances, showing case examples of actual land uses of depleted deposits.

As a member of this Association, Del Monte Properties Company feels that industrial sand companies should be excluded from meeting the requirements of Senate Bill S3182. Their own past records of conservation and good land planning speak for themselves.

Del Monte Properties Company, especially, who holds some of the most beautiful land in the world in the Del Monte Forest, has been and is very conscious of land use. We have used depleted sand mining areas for portions of golf courses, tasteful residential subdivisions, and dedicated greenbelts.

If, however, industrial sand companies have to be included in this bill, we believe the requirement of posting a bond would create an undue hardship.

As a case in point: we are presently mining sand in an area which has about 80 years of life at our present mining rate. We know that eventually, when the area is depleted, the lands, which are very valuable, will be developed in good taste. But, at this time we do not know whether the area will be utilized for single family dwellings, multiple housing, or even, perhaps, another golf course. **To post a bond now to insure future development, in our opinion, would be unrealistic and unfair.** Who knows at this time what the best use of lands will be forty, fifty, or even eighty years hence?

Again, it is our feeling that industrial sand companies, because of their past good records, should not be included in this bill.

If, however, they are included, we believe that the bond posting requirement should be waived.

Very truly yours,

HUGH H. BEIN.

Senator METCALF. If no one else wishes to be heard, I now will close the hearings on these bills. Thank you all for your attendance and assistance to us.

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