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# FIRE ANT ERADICATION PROGRAM

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## HEARING

BEFORE THE

SUBCOMMITTEE ON DEPARTMENT OPERATIONS,  
INVESTIGATIONS AND OVERSIGHT

OF THE

COMMITTEE ON AGRICULTURE  
HOUSE OF REPRESENTATIVES

NINETY-FOURTH CONGRESS

FIRST SESSION

JUNE 26, 1975

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## FIRE ANT ERADICATION PROGRAM

THURSDAY, JUNE 26, 1975

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON DEPARTMENT OPERATIONS,  
INVESTIGATIONS AND OVERSIGHT OF THE  
COMMITTEE ON AGRICULTURE,  
*Washington, D.C.*

The subcommittee met at 2 p.m., pursuant to call, in room 1301, Longworth House Office Building, Hon. E de la Garza [chairman of the subcommittee] presiding.

Present: Representatives de la Garza, Poage, Jones of North Carolina, and Jenrette.

Also present: Robert M. Bor, counsel; John E. Hogan, associate counsel; Steve Pringle, staff consultant; Robert R. Palmer and Jerry Jorgensen, staff consultants, Subcommittee on Department Operations, Investigations and Oversight; Norman Gay, staff consultant, Subcommittee on Oilseeds and Rice; and Perry Shaw, staff assistant.

Mr. DE LA GARZA. The subcommittee will be in order.

I apologize for the delay in commencing the hearings. As all of you know, the House is in session and a recorded vote was just announced. Other members are there now and will catch up with us soon.

The purpose of this hearing is to go further into the oversight function of the Committee on Agriculture by its Oversight subcommittee of the problem concerning the fire ant infestations throughout the United States to keep ourselves abreast of the situation from the agency standpoint as to what they have done, what they are doing, and what they plan to do with regard to this problem.

The problem is that the fire ant is causing a tremendous amount of damage throughout a major portion of the United States. It is now spreading almost uncontrollably, to the extent it is almost to the Mexican border throughout the West and Southwest, and it is heading west very rapidly. Before we know it, we might have the entire United States infested. The people in the area involved have expressed themselves as to the tremendous problems, costs, anguish and frustration in not being able to do anything about it because of restrictions imposed upon them by the Government or some phase of the Government.

Hopefully we might be able to shed some light on what the Government is trying to do in order to alleviate this situation within the constraints, of course, of the overall environmental impact which none of us, particularly the present occupant of the Chair, are interested in causing harm to the ecology or the environment of any area. We are interested, however, in seeing that the people in the area affected have the fullest cooperation from the Government, hopefully from the

gentlemen who will appear here today, to help them eradicate this pest to the fullest extent possible without causing undue damage to any other aspect of their lives.

With that, the first witness we will hear today will be Mr. John R. Quarles, Deputy Administrator, Environmental Protection Agency.

We will be happy to hear from you, Mr. Quarles.

We understand you have with you Mr. Edwin Johnson, Mr. Frank Sizemore, and Mr. Fred Arnold.

Is that correct?

Mr. QUARLES. Yes.

[The prepared statement of Mr. Quarles follows:]

STATEMENT OF  
HONORABLE JOHN R. QUARLES, JR.  
DEPUTY ADMINISTRATOR  
ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE  
SUBCOMMITTEE ON DEPARTMENT OPERATIONS,  
INVESTIGATIONS AND OVERSIGHT  
COMMITTEE ON AGRICULTURE  
HOUSE OF REPRESENTATIVES  
JUNE 26, 1975

Good afternoon, Mr. Chairman, and Members of the Subcommittee. I am John R. Quarles, Deputy Administrator of the Environmental Protection Agency. I am pleased to have this opportunity to explain Agency policy regarding the use of Mirex in fire ant control.

I know I need not provide an in-depth catalog of the undesirable characteristics of the fire ant. We are all aware that the pest can disrupt agricultural practices, injure farm animals, and worst of all, inflict a burning, painful sting to humans. There are many documented cases of violent reactions to the sting which have required the hospitalization of the unfortunate victim. Parents write that aggressive ants attack their children at play. The public outcry for protection in infested areas is more than understandable. I first of all, then, emphasize that EPA is most sympathetic to the complaints of those whose

daily lives are affected by the ant. We recognize the desirability and need for adequate protection from the ant's harmful activities. It is for this reason that we have expended considerable Agency resources to find ways to continue to make insecticides available for the control of this pest.

The health and agricultural damage caused by the ant is a major factor in evaluating proper control methods, but there are other factors which must be considered as well. This Agency is mandated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to register only those pesticides which, when used in accordance with label directions and precautions, will not pose unreasonable adverse effects to man or the environment as determined by a benefits versus costs evaluation. With this mandate in mind, I believe some background on the fire ant and the factors leading to the current EPA restrictions on Mirex would be in order.

As the Committee is aware, the fire ant was accidentally introduced in this country around 1918. It has spread widely despite an intensive Federal/State cooperative control effort which was initiated in 1957 under the auspices of the U. S. Department of Agriculture. During the years since its inauguration, the public program has

been modified several times in response to new information on control technology and the environmental impact associated with extensive treatment efforts. Since the mid-1960's Mirex has been used to treat up to fourteen and one-half million acres per year in an attempt to rid the country of the fire ant. However, the ant has not been contained; the pest has been able to expand its area of infestation from 26 million acres in 1959 to more than 126 million acres today.

Because of its demonstrated ability to survive in the midst of massive eradication attempts, concern has been voiced regarding the logic of continued public action against this tenacious pest. In 1965, the Comptroller General of the United States expressed the sentiment that "success of the program is doubtful because plans for systematic eradication of the fire ant have not been effectively implemented." The report pointed out that an expenditure of \$24.7 million during the period 1957-1963 had not resulted in a reduction in the number of infested areas. On the contrary, a net increase of 11 million infested acres during this period prompted a suggestion that the entire program be reappraised in light of demonstrated ineffectiveness. In 1967, the National Academy of Sciences submitted a report to the Administrator of the

Agricultural Research Service, USDA, concluding that eradication of the fire ant was biologically and technically infeasible, and inadvisable even if it were possible, in view of the potential environmental damage. USDA itself came to acknowledge the failure of the eradication approach. In 1971, the USDA Statement on the Imported Fire Ant and Its Control affirmed that " . . . an eradication program for the 126,000,000 infested acres has been considered and rejected . . . although . . . studies showed that the imported fire ant could be eradicated with current technology, a decision was made that such a program was not then feasible." This opinion was echoed in the 1972 USDA Environmental Impact Statement which stated that, "The goal of the Department . . . is to react . . . in reducing massive infestations to a manageable level." Notwithstanding the fact that eradication was replaced by control as a goal of the Federal/State program, the extensive range of the fire ant has dictated treatment of more and more areas; in fact treatment in recent years under the control program has resulted in aerial application of Mirex to more acres annually than were treated in the earlier eradication efforts.

The principal controversy surrounding the use of Mirex has concerned the environmental and human health effects of the spray program. In August 1970, a suit filed by the

Environmental Defense Fund sought an injunction to restrain the Department of Agriculture from further use of Mirex in the imported fire ant program. Because the issues raised by the suit indicated that there was substantial question of safety concerning Mirex use in fire ant control, the Environmental Protection Agency issued a notice of intent to cancel the registration of Mirex, in order to trigger the administrative review process. Prior to the 1972 amendments to FIFRA, the Agency had no means to initiate a public review of a pesticide registration other than to formally issue a notice of intent to cancel. Under the appeal provisions of the Act, a registrant could then request an advisory committee review or a public hearing of the issue; the product under review could continue to maintain full registration status during the pendency of the administrative process. The 1972 amendments to FIFRA provide under Section 6(b)(2) that the Agency can call hearings in order to determine whether initiation of cancellation action would be appropriate. The Agency thus presently enjoys much greater flexibility in assessing potential hazards to registered products than it did in 1970 when Mirex was first the subject of public criticism and concern, and has substituted the less onerous 6(b)(2) procedures in Mirex review.

The registrant of Mirex, Allied Chemical Company, requested that the registration question be referred to a scientific advisory committee for review. The Committee, consisting of members nominated by the National Academy of Sciences, issued its final report to the Administrator on March 1, 1972. Toxic effects from low levels of Mirex on aquatic life, particularly shrimp and blue crabs, and considerable Mirex residues especially in predators of ants, were noted. After an extensive study of the known data on Mirex and the adverse effects of the fire ant, the Committee made several recommendations to EPA, among them:

- . that the registrations of Mirex be continued with labeling restrictions to minimize environmental contamination;
- . that control programs should be limited to infested areas where the imported fire ant is a problem because of use by people or interference with agricultural operations. Estuaries and other aquatic habitats, wildlife refuges, and heavily forested areas should not be treated; and
- . that more research on the possible hazards of Mirex to man and his environment must be conducted before the role of Mirex can be accurately assessed.

Chronic toxicity, carcinogenicity, mutagenicity,

teratogenicity and the metabolic fate of the compound in multiple species should be further studied. Additional work on the biological stability, persistence and routes of movement under field conditions is needed. Continued and expanded monitoring of key environmental carrier and selected commercially important species for Mirex residues should be conducted with emphasis on the detection of any significant contamination of the human food chain. And finally, that greater effort should be made to correlate laboratory and field research, and research into alternatives to Mirex should be encouraged.

In orders published in May and June 1972, EPA reinstated the registrations of Mirex for both aerial and ground application, on the condition that equipment for the latter be properly calibrated. Aerial application in coastal counties and on or near aquatic or heavily forested areas was prohibited (with the exception of Hawaii).

Because of the large number of unknowns which still surround the use of Mirex, the Administrator exercised his 6(b)(2) option under the amended FIFRA, and announced in March 1973 his intent to convene public hearings to fully explore the ramifications of continued Mirex use.

Two basic issues have been explored during the public hearing, as defined in EPA's Statement of Issues:

1) whether Mirex or its present labeling or other material submitted in support of its registrations complies with the provisions of FIFRA, and

2) whether, when used in accordance with widespread and commonly recognized practice, Mirex generally causes unreasonable adverse effects on the environment, as defined by FIFRA.

To properly determine the answers to these questions, several related matters were included in the Statement of Issues as follows:

1) The chemical properties of Mirex, such as its persistence, mobility and potential for bio-concentration.

2) The hazards to man.

3) The hazards to the environment with emphasis on hazards to aquatic life.

4) The benefits arising from the use of Mirex with emphasis on:

a) the nature and extent of the problem posed by the fire ant; (b) the effectiveness of area-wide use of Mirex to control the spread of fire ants; (c) the effectiveness of a program of localized use of Mirex to control human health and agricultural problems caused by

the fire ant; (d) the benefits expected to be achieved by each such control program, measured against the damage which would occur if such a program were not undertaken; (e) the availability and effectiveness of, and the hazards connected with, alternative control measures; (f) the adequacy of the existing label directions in protecting sensitive areas from Mirex contamination; and (g) application control measures which are necessary to avoid Mirex contamination of sensitive areas, and the reliability of such measures.

The hearings began in December 1973. EPA extended the 1972 orders permitting the Federal/State application during the spring and fall 1973. Extensions were likewise granted in 1974.

EPA's orders regarding Mirex use are directly related to protecting marine resources in susceptible areas, and to the other issues under consideration in the public hearings. The 1972 orders prohibited aerial application in coastal counties but permitted ground broadcast by private individuals with properly calibrated equipment. Monitoring by USDA was required. The 1973 order generally extended the provisions of the 1972 orders with the exception of providing more accurate definitions of "inland aquatic habitats" and "heavily forested areas" at the request of

USDA. In March 1974, the orders were extended with the additional provisions that USDA monitor all flight plans, that treatment be limited to those areas where ants pose an immediate hazard to people or livestock, and that State programs should meet USDA requirements.

As you are all aware, the USDA has announced that the cooperative program is to terminate at the end of this month because EPA restrictions have forced the USDA into a policy of "living with the ants" rather than eradicating them. As you are aware, too, there has been correspondence between this Agency and the USDA since the Department's decision to abandon the program about the entire concept of eradicating the ant. As I have indicated above, there are several USDA sources which unequivocally declare that the Federal/State program became a control, rather than eradication, program before EPA issued its first order prohibiting aerial application in coastal counties.

I can assure you that this Agency was under the impression that USDA was attempting to achieve control of the ant. I can also assure you that at no time since I have been in the Office of Pesticide Programs has the Department requested that EPA lift the current restrictions so that the ant could be once and for all eliminated. (We believed that our orders were consistent with USDA control

plans, and that we were not unduly interfering with the adequate control of the pest while at the same time trying to avoid environmental contamination. )

While this discussion may appear to be rhetorical inter-agency squabbling, I must point out that the USDA announcement brings us to the crux of some very important issues. Is eradication technically feasible? If so, how much will it cost? Who will pay the cost? How long will it take? What will be the environmental costs? Do the benefits justify the expense and outweigh the risks? Before further exploring these questions, I feel that we should stop and review what we have learned about Mirex during the ongoing hearings.

First, Mirex is extremely stable and non-reactive in both living and non-living matter, and is thus exceedingly persistent. Mirex shows strong tendencies to bioconcentrate since it is not metabolized. Research on rates of excretion in vertebrate bodies reveals that "the resistance of Mirex to biodegradation and its long biological half-life indicate that this insecticide may have an environmental half-life which far surpasses that of any previously studied insecticide." Milk cows can excrete Mirex through milk, due to the chemical's affinity for lipids. EPA is currently undertaking a program to monitor mother's milk for Mirex

to determine if human beings also pass the chemical to their offspring.

In studies conducted by the Bionetics Research Laboratories for the National Cancer Institute (NCI), Mirex shows positive carcinogenic potential in both the mouse and the rat. NCI is currently embarking on an additional feeding trial to further assess the cancer risk posed by Mirex.

Mirex is highly toxic to crustaceans at extremely low levels in laboratory tests. Exposure of blue crabs to one particle of 4X Mirex bait paralyzed or killed 84 percent in one test and 50 percent in another. It has also been shown that crabs do not have to actually eat Mirex bait to succumb to its toxic effects. Tests have also shown that mortality can occur through the food chain--crabs which feed on shrimp containing 1.1 ppm Mirex died within 14 days in one experiment. The susceptibility of crabs is particularly important because juvenile crabs spend much of their early lives in shallow coastal waters and estuaries off the Gulf and South Atlantic, and can be exposed through direct Mirex treatment as well as through fresh water runoff from treated areas. Shrimp and crayfish are also susceptible to extremely low levels of Mirex.

1972 USDA monitoring data revealed 88-100 percent positive results in sampling various fish for Mirex residues. Out of 77 samples of beef fat tissue taken by USDA, 87 percent showed positive Mirex in cattle.

EPA is anxious to resolve the Mirex issue in a manner which will provide adequate protection from the fire ant and will also preserve environmental integrity. We have been meeting with the parties to the hearing to work out a resolution. We also met with the States concerned in fire ant control on May 1 to offer a proposed treatment plan. Subsequent to that date we have met weekly with the representatives of all the various parties and have worked out proposed settlement terms. This past Tuesday we met with many of the States to discuss the terms and expect to have the thinking of most of them by early next week. We believe that the terms of settlement which have been worked out over these many months provide for a workable fire ant control program while at the same time satisfy the basic needs of environmental protection.

As you can appreciate, since these negotiations are being carried out in hopes of settling a pending administrative trial it would not be proper for me to discuss the terms in any detail. It does seem appropriate, however, to touch on three of the more important issues which had been holding

up progress in settlement in the past and which have been satisfactorily resolved in the spirit of cooperation.

First, the basic problem in finding an acceptable resolution is in the protection of the aquatic areas. Most of the States wish to continue use of aerial application and the terms of settlement preserve that option through use of helicopters or single engine planes instead of large planes which fly at a high altitude and are not able to accurately place the bait so as to miss sensitive aquatic areas in the treatment path. I think it is important to remember, in speaking of protecting aquatic areas, that EPA does not prohibit the use of Mirex around these sites--it is the non-selective aerial application to which we object. It is also important to remember that there are many industries in the South which depend on the quality and quantity of crustaceans, and their economic interest must be considered as well as basic environmental considerations.

Second, at the urging of all the States, we have agreed to abandon the current one-treatment-per-area restriction. Two applications over a two-year period, with the two applications occurring as close together as the applicator would desire, have been adopted and are a substantial step forward for control of the fire ant.

Third, all of the parties have recognized that the current "coastal county" restriction for aerial application which is based on political boundaries, does not effectively address problems of infestation or environmental protection. A coastal zone concept which is in the proposed terms serves both of these objectives.

Obviously, we cannot discuss the possibility of future Mirex policy without exploring the concept of eradication which has been introduced by the USDA. There are several very critical questions to be answered, as I indicated earlier, before eradication can be considered a reasonable solution to the fire ant dilemma. The number one question, of course, is "can the fire ant be eradicated given its present range and adaptability?" Perhaps a joint EPA/USDA study should be undertaken to address this point. Secondly, if technically feasible, how much would such a program cost? Through FY 1975, Federal appropriations for fire ant control will have already totaled \$83.5 million. We would expect that a full eradication program would cost hundreds of millions of dollars. Would the taxpayers, through the Congress, support such a large expenditure of public funds for a regional problem? Thirdly, what would be the environmental costs of conducting an eradication program? A full Environmental Impact Statement would have to be written and

opened to public comment. What would be the effect on the industries dependent on marine life in the South? What would be the effect on people who eat the livestock and fish from treatment areas? Is it wise to commit oneself to begin a large scale program with a chemical which may, early into that program, be found to be a carcinogen? Basically, do the benefits from an eradication program exceed the risks involved in such a program?

It is our belief that the answers to the basic questions and issues described in this statement must be determined by the USDA and this Agency, either separately or jointly. We believe that we have acted as fairly and as quickly as possible in carrying out the responsibility mandated by the FIFRA to evaluate the benefit/cost equation, and have proceeded with policies which we believed to be in the best interests of the public. It should be emphasized that EPA has not developed criteria for the conduct of an eradication effort, since such has never been a "working" objective of the program. We are anxious to learn just what this approach would entail, and are more than willing to work with USDA in exploring this option. We are similarly ready to work with this Committee on this problem, especially in the event that eradication proves to be a viable course, as the large additional appropriations for such a program would have to

be approved by the Congress. During the period of study of an eradication program, if there is to be one, the terms of settlement will make Mirex available for control of the fire ant and protect the environment.

Mr. Chairman, that concludes my prepared statement. I will be happy to answer any questions you may have.

Mr. DE LA GARZA. Thank you very much, Mr. Quarles.

I do have some questions, but following the custom in the committee if you have no immediate press for time elsewhere we will ask that you allow Mr. Campbell to testify and then both of you then would be available for questions.

Mr. QUARLES. Indeed. Thank you.

Mr. DE LA GARZA. The next witness will be Hon. J. Phil Campbell, Under Secretary, Department of Agriculture, accompanied by Dr. Francis J. Mulhern, Mr. James O. Lee, and Mr. Raymond W. Fullerton.

Mr. CAMPBELL. Thank you, Mr. Chairman.

I would like to question the chairman's statement at the beginning that this is now in court. Mr. Chairman, I do not believe——

Mr. DE LA GARZA. We have a vote call. Would you prefer to withhold your testimony? We shall return promptly.

Mr. CAMPBELL. Thank you.

[Recess taken.]

Mr. DE LA GARZA. Please proceed, Mr. Secretary.

Mr. CAMPBELL. I would like to point out this case is not in court but is in a hearing procedure. I thought for the benefit of the Chair we might correct the record on that point.

Mr. DE LA GARZA. I appreciate that correction. The record will be corrected in that respect.

[The prepared statement of Mr. Campbell follows.]

Statement of  
J. Phil Campbell, Under Secretary  
U. S. Department of Agriculture  
before the  
Subcommittee on  
Department Operations, Investigations, and Oversight  
House Committee on Agriculture  
June 26, 1975

Mr. Chairman:

I appreciate this opportunity to discuss with the Subcommittee the Department's program for the imported fire ant.

Let me state at the outset that we have not come here to justify fire ant eradication because of the economic losses it might cause to American agriculture. While it does cause some difficulties in agriculture, we want to make it clear that the fire ant is really a people pest that causes thousands of Americans to seek medical attention each year, even hospitalization, plus perhaps thousands more who don't go to a doctor when they are stung. Although the fire ant sting is rarely fatal, it is especially serious when small children are involved.

Some opponents of the imported fire ant program contend that fire ants are no more of a nuisance than wasps or bees or hornets or yellow jackets. This is true if there were only as many imported fire ants per acre in infested areas as these other stinging pests. In fact, if there were 5 million hornets or wasps to an acre of ground, as there are fire ants in some areas, no one would stay in the infested areas.

Some of these same people are concerned that the imported fire ant program is tampering with the natural environment. But the imported fire ant was not a part of the North American environment before it entered this country at Mobile, Alabama, in 1918. Our efforts are to recoup some of the natural environment as it was before this foreign pest came in.

Because the fire ant is a people pest, State legislatures are willing to put up millions of dollars each year in the hope of giving their people some relief. In fact, during the past 4 or 5 years, the States have had available more control funds than the Department could match.

Based on my own personal experience in the State of Georgia, and on the extensive background of the U.S. Department of Agriculture in pest and disease eradication programs, I know that the fire ant can be eradicated. And we have the scientific technology needed to do it.

The eradication of the imported fire ant and of cholera in hogs are the two easiest eradication programs I know of -- compared to the programs to wipe out brucellosis and tuberculosis in livestock, which are very complex and take a great deal of time. With little interference, inhibitions, or restrictions, last year we saw hog cholera completely eliminated from the United States after a 13-year Hog Cholera Eradication Program that began in 1961.

And in the State of Georgia, where we started the Nation's first fire ant eradication program back in 1967, we had the ant pushed back to the southwestern corner of the State by 1971. But since EPA limited the use of mirex to one application per year the fire ant has spread back to cover more than the area we started with eight years ago. This has been a complete waste of taxpayers' money in the reinfested areas, because the final result of all our efforts was only brief respite.

The reason one treatment per year does not work is easy to see if you understand the reproductive habits of the fire ant. During the mating season, many females and males swarm from each mound and mate in

the air. Depending on wind conditions at the time, the mated queens may fall to the ground anywhere from one to 12 miles away from the original mound. For 15 to 18 days, while the queen lays her eggs, no foraging ants are available to feed her, which means that no ants are out gathering the mirex bait. Since the bait lasts only 2 to 3 days, any applications during the mating season are not efficient. But in many areas mating goes on almost year round. In order to reach these new queens we need to spread mirex bait at least three times in a 10 to 15 month period. Generally, there is only one fire ant queen per colony. Therefore, once the queen is killed, reproduction ceases and the whole colony dies. The only result of one application of mirex per year is temporary relief in the treated areas. One application does not prevent the outward expansion of fire ant infestations to cover new areas.

Our experience with fire ant eradication has conclusively shown that three treatments within a 10 to 15 month period provides the most effective program, with no adverse effects on the environment. Our experience is based on the use of mirex on millions of acres of land each year. No harm to fish or wildlife has yet been observed. In fact, there was one incident in which an entire load of bait had to be dumped into a small pond from an airplane because of engine trouble. Even after a thorough search of the area we were unable to find any signs of mortality or ill effects on the local wildlife population. There may have been some residues in certain animals, but no actual harm was observed.

Research on mirex by the Department started back in 1959 in the laboratory. We found, over a period of time, that at the rate and formulation used in the program, mirex is the least hazardous insecticide

that could be employed. It would be impossible for a person to obtain a lethal dose either by breathing fumes from it or through contact with the skin.

After a 1967 study of the fire ant program by the National Academy of Sciences suggested that eradication was neither feasible nor justified, we selected a 2 million acre area in Georgia and initiated a large-scale eradication trial. By 1969, we had eradicated the fire ant from these 2 million acres, proving that it can be done.

This was not the first time we proved our critics wrong. In 1963, at the initiation of the Hog Cholera Eradication Program, we were challenged by an ad hoc group of renowned scientists -- specialists in animal diseases -- who flatly stated that we could not eradicate hog cholera. However, we knew this group was as wrong then as those who now say we cannot eradicate the fire ant. I have here the text of the report of this ad hoc committee of scientists to illustrate the impracticality of non-program people passing judgments without first being involved in field work. Mr. Chairman, I submit this for the record.

We know that eradication of the fire ant with mirex would not endanger man or the environment. In 1972, the Department stepped up its monitoring activities and instituted a biometrically designed monitoring program that allowed for representation of all treated acreage. The environmental components monitored include soil, vegetation, water, sediment, fish, crustaceans, birds, and small mammals. The data gathered in this program show no adverse effects on the environment. Research on bird samples indicates a margin of safety in excess of 3,400 which means, for example, that only one mockingbird in 100,000 may exhibit toxic symptoms. Wildlife could even eat small amounts of mirex and not

suffer ill effects.

However, before this proof was fully developed, we felt compelled by growing public concern for the environment and some remaining doubt about whether mirex was a carcinogen, to cut back mirex applications to one per year. Although we knew at the time that one treatment was not going to be effective, we felt obligated to make an effort to give some relief to the people in infested areas.

At the same time, we began discussions with EPA in the hope of working out a continuation of the program informally. But we eventually became convinced that EPA was going to decide to limit mirex application to one per year through its label requirements. And it did so.

We have continued with a fire ant control program since then only to provide whatever little relief we could. But there really is no such thing as "control." Our limited so-called "control" efforts have given only temporary relief, and have not prevented the fire ant from spreading even further. Negotiations with EPA to let us return to the three-treatment eradication concept have not been successful.

So earlier this spring we were faced with a choice -- to continue to throw away public money on a hopeless battle in which we would keep on putting a pesticide into the environment forever, or to suspend the program. We believed we could not in good conscience continue to hold out false hope to suffering people while spending their tax money in an effort that had already permitted the ant to spread over another 7 million acres.

The Department of Agriculture would like very much to go to a genuine eradication program. We not only have the necessary experience in eradication, but a technology that has been proven effective and not

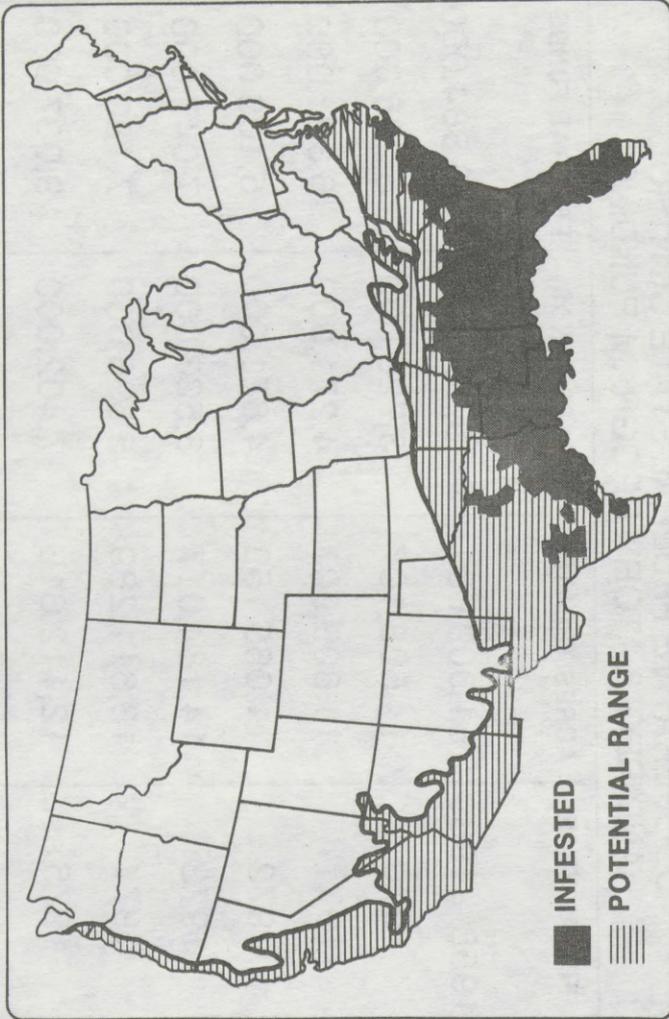
harmful to man or the environment. If Federal funds are to be expended, we must be able to apply three treatments within a 10 to 15 month period.

The Federal-State cooperative approach is the most efficient way to get the job done. If the States are thrown back on their own resources, they simply will not be able to provide the support activities necessary to do it right -- monitoring, planned coordination of treatment, research and development. And each State would have to provide its own fleet of aircraft, complete with the sophisticated guidance systems we have relied upon to assure pinpoint accuracy in aerial application. And the States would lose the experienced Federal supervisory personnel who know how to keep the program running. Without Federal support and assistance, and under the present EPA restrictions, individual State efforts are doomed to disappointment.

Mr. Chairman, we welcome this opportunity to discuss with you the future of fire ant eradication. We are willing and eager to work with anyone -- the Congress, or the Environmental Protection Agency -- to come to a realistic agreement soon, before this vicious pest can spread another mile across the United States.

We will be happy to answer any questions you might have.

**EXTENT OF FIRE ANT INFESTATION 1975**  
**133 MILLION ACRES**



PLANT PROTECTION AND QUARANTINE PROGRAMS  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

U.S. DEPARTMENT OF AGRICULTURE

**IMPORTED FIRE ANT  
COOPERATIVE FEDERAL-STATE CONTROL  
AND REGULATORY PROGRAM FUNDING**

FISCAL YEAR	ACRES TREATED	STATE FUNDS	FEDERAL FUNDS
1958 - 1969	51,909,001	\$ 25,250,000	\$ 36,884,000
1970	14,508,107	3,720,000	5,295,000
1971	11,609,907	4,271,000	6,361,000
1972	11,065,153	4,671,000	5,108,000
1973	14,184,017	3,533,000	7,047,000
1974	13,611,289	5,696,000	7,180,000
1975 est.	12,112,616	7,402,000	9,037,000

PLANT PROTECTION AND QUARANTINE PROGRAMS  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

U.S. DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE  
Animal and Plant Health Inspection Service

Imported Fire Ant  
(Obligations)

<u>Fiscal Year</u>	* Cooperators Control Funds	Federal Control Activities	Other Federal Activities	Total Federal Funds
1958	\$ 1,506,000	\$ 736,000	\$ 1,352,000	\$ 2,088,000
1959	2,302,000	1,269,000	1,168,000	2,437,000
1960	1,844,000	1,550,000	1,060,000	2,610,000
1961	1,428,000	1,465,000	1,081,000	2,546,000
1962	1,343,000	1,392,000	1,137,000	2,529,000
1963	1,735,000	1,689,000	1,278,000	2,967,000
1964	1,896,000	1,258,000	1,188,000	2,446,000
1965	1,864,000	1,764,000	1,213,000	2,977,000
1966	2,076,000	2,106,000	1,143,000	3,249,000
1967	2,002,000	2,835,000	1,075,000	3,910,000
1968	3,524,000	3,280,000	1,250,000	4,530,000
1969	3,730,000	2,839,000	1,756,000	4,595,000
1970	3,720,000	2,843,000	2,452,000	5,295,000
1971	4,271,000	2,533,000	3,828,000	6,361,000
1972	4,671,000	2,587,000	2,521,000	5,108,000
1973	3,533,000	4,519,000	2,528,000	7,047,000
1974	5,696,000	3,916,000	3,264,000	7,180,000
1975 (est.)	7,402,000	5,067,000	3,970,000	9,037,000

It has always been recognized that certain phases of the total program operations are primarily a responsibility of the Federal Government and not required to be included in the matching cost arrangements with the Cooperator. These Federal activities are necessary to support control activities and include Federal quarantine enforcement, surveys in peripheral areas and non-infested States, methods improvement work, planning and coordination of areawide programs, and business services. The costs for carrying out these Federal activities must be financed each fiscal year within the total Federal funds available. At the same time, all contributions from the Cooperator are available for and applied to the costs of the control activities which are conducted on a cooperative basis.

Mr. DE LA GARZA. Thank you very much, sir. I very much appreciate your testimony and your being here.

I would invite Mr. Quarles to join you at the table at this time.

Mr. Jones, do you have questions?

Mr. JONES of North Carolina. Thank you, Mr. Chairman. I appreciate sitting with this subcommittee although I am not a member.

Much of what I would have said has been very well stated by the Secretary of Agriculture, my friend Phil Campbell.

The one thing that has concerned me from what I have heard here this afternoon, and to you, Mr. Quarles, let me offer you my sympathy because of some of the types you have to deal with I know must drive you up the wall at times, but you have to make the decisions.

I am somewhat concerned that EPA would even hesitate to make any decisions in relation to control or eradication. I simply do not see why you would want to control the fire ants even when you have proven methods stated in Secretary Campbell's testimony. You have it proven that you can eradicate the fire ant.

Quite frankly, it is a new problem in my congressional district, for the last 2 or 3 years. It is spreading from one county into three additional adjoining counties.

I have a statement from the secretary of the North Carolina State Department of Agriculture to the effect that when aerial spraying was permitted that upon careful and thorough examination of the exhausts they found no detrimental results whatsoever in the streams or estuaries.

I would hope from these hearings we can return to a sensible and commonsense approach to this problem.

I would like to direct a question to you, Mr. Quarles. I believe you stated in your testimony that you, indeed, were reconsidering your position to some degree. Would you like to qualify that further?

Mr. QUARLES. I would like to make several comments in appropriate response to your question. One is that I hope it is fairly clear through the combined testimony that I and Mr. Campbell have given that the basic restrictions which now apply to mirex originated with decisions made with the USDA. In other words, the one treatment per year originated from within USDA and we have carried it forward. The restrictions originated from within USDA and we have carried those forward.

There has been continuing debate over the appropriateness of those restrictions and the fact they are in effect now our responsibility. I am not trying to pass the buck on that.

On the other hand, in regard to the question which you suggested, that perhaps we have to respond to extremists and make judgments which we ourselves do not think are rational—

Mr. JONES of North Carolina. That has to do with other areas.

Mr. QUARLES. The basic approach as we have it here is not to be regarded as wholly unreasonable, at least not from people within USDA where those things originated.

As far as a decision between a control or an eradication program, what I am trying to say is that that is not our decision alone to make. What I am trying to convey is that the restrictions which now apply were devised to apply to a control program. We are concerned with regard to the amount of mirex which is put into the environment. I

hope we would be the first to acknowledge that the consequences from mirex are quite unclear.

There is some indication that they are very serious. There are other indications they are less serious. A great deal needs to be known. However, we believe there is a basis for being concerned.

If an eradication program were to be undertaken, then perhaps that might justify taking off some of those restrictions which, if you are looking at a control program, are reasonable.

Mr. JONES of North Carolina. According to the testimony of Mr. Campbell, and my own experience within my own district, the control program obviously is not working nor being effective. Your 1-year restriction and your restrictions on the aerial distribution of mirex came from a recommendation of the USDA?

Mr. QUARLES. Originally, yes; back in 1972.

Mr. JONES of North Carolina. If, indeed, USDA claims they made a mistake in making these recommendations, and I take it from the Under Secretary's testimony these were not—

Mr. CAMPBELL. One treatment will spread the fire ant rather than reduce it. It does not control it. It requires three treatments.

Mr. JONES of North Carolina. Mr. Campbell, would it be unreasonable to ask you whether it would be possible for the Department to retrench from the recommendations or retreat from the recommendation it made and go back to the three times a year treatment based on the knowledge which you now have?

Mr. CAMPBELL. We would like very much to do that. That is exactly what we would like to do. These maps illustrate the results of one treatment. On the left we have the maximum infestation in the State of Georgia before we went to three treatments. The middle shows how much we reduced the infested area with three treatments.

On the right, if you can see the map, it shows how far the ant spread with only one treatment. They spread farther than they ever were in the State before.

[The maps referred to may be found on p. 33.]

Mr. JONES of North Carolina. Is the USDA at this point in a position to reconsider?

Mr. CAMPBELL. I will tell the committee that right now. We will go to three treatments at any time that we are permitted to do so by the restrictions imposed.

Mr. JONES of North Carolina. Would you agree to permit under certain conditions aerial applications?

Mr. CAMPBELL. I didn't catch that question.

Mr. JONES of North Carolina. Would you under certain controlled conditions also agree to return to aerial applications?

Mr. CAMPBELL. We must have aerial applications. We cannot eliminate the ant without aerial applications.

Mr. JONES of North Carolina. This hearing is turning out beautifully. I find out Mr. Quarles is acting under a former recommendation from your Department. I find now your Department is willing to retreat from the recommendations and return to the use of the three-times-a-year treatment, plus the aerial spreading. If that is true, and I assume Mr. Quarles will accept that, we are moving right on, Mr. Chairman, to be a fine meeting.

Mr. QUARLES. Let me spoil that illusion. As I said at the very beginning, one of the concerns we have here is sort of looking backwards because of the feeling which has been expressed that we have been unreasonable. A lot of the history, I hope, goes to suggest we have not been so blatantly unreasonable.

The other concern is looking forward and the question of what should be done now. We have been, as I have previously indicated in discussions with State agencies and with the USDA and the manufacturer and environmentalists in regard to the modification of the current restrictions. One of the modifications which we are almost certain to make would be to permit two applications within a 24-month period.

Mr. JONES of North Carolina. Within a 24-month period?

Mr. QUARLES. Yes.

Mr. JONES of North Carolina. That would be one application a year, then.

Mr. QUARLES. There is a very important distinction, which is that in the one application per year restriction when an application is made there is no ability to come in a few months later with a cleanup effort for those which were missed, whereas with two applications in 2 years you could not make a greater number of total applications in a 2-year period but the timing would have a flexibility which would permit the two applications to be immensely more effective.

Mr. JONES of North Carolina. How about the aerial application?

Mr. QUARLES. The aerial application has never been prohibited in its entirety. We would continue to permit aerial application by a helicopter or a single-engine, fixed-wing aircraft. This raises an issue of some dispute because there is a desire, I believe, although I should let Mr. Campbell speak for himself, but as I understand the USDA position, they strongly feel they need to make the aerial application with a larger aircraft at higher altitude.

However, we would continue to permit aerial application. However, one of the really big points that I think needs to be understood—and it is coming through but the whole subject is so complicated it is hard to get the whole story across—is as follows:

If the country is going to undertake an eradication program it is not going to be successful, I think Phil Campbell would be in complete agreement with this, unless eradication is undertaken everywhere—the wooded areas, marine areas, and you simply put down the full application to eradicate the fire ant. Even at that there are some who feel it still will not be successful. However, if the eradication program is undertaken those applications in marine areas will be necessary.

What I am saying is that we are certainly not going to relax the requirements to permit those types of applications, aerial application over waterways, three applications a year, unless the country is going into a full-scale eradication program.

I do not believe you, USDA, EPA, or anybody else is in a position to make that judgment until some serious study is made as to really what that would entail in terms of costs and results.

Mr. JONES of North Carolina. Then you give no credit to the experiment in the State of Georgia where they completed an eradication program several years ago?

Mr. QUARLES. That is an extremely important part of the picture that should be considered. I certainly would give credence and credit to that.

Mr. JONES of North Carolina. We have a vote again. There is one thin line involved here. I compliment you on the job you are doing, which sometimes is unpleasant.

It seems that your concern is with regard to the use of mirex and its potential damage, unproven, whereas my concern is the eradication of the fire ant.

Mr. Chairman, that concludes all I have to say. I compliment both gentlemen with regard to their forthright statements and I thank Mr. Campbell for his presentation.

As I said at the beginning, he made many statements which I would like to have made but he made them far more eloquently than I. I thank him for his position.

I would hope, Mr. Campbell, the Department will reverse its position and make recommendations to the EPA to relax some of the "controls" they are now exercising.

Mr. DE LA GARZA. If you gentlemen would bear with us for a short recess we will allow you to go back to your seats.

We will stand in recess for about 10 minutes.

[Recess taken.]

Mr. DE LA GARZA. The subcommittee will be in order. I appreciate your cooperation, gentlemen. Hopefully this will be the last interruption before we complete our hearings.

Secretary Campbell, in your testimony you spoke of infested ranges and pastures. I do not see a copy of the Georgia map which I saw in the exhibit. Would you submit that for the record?

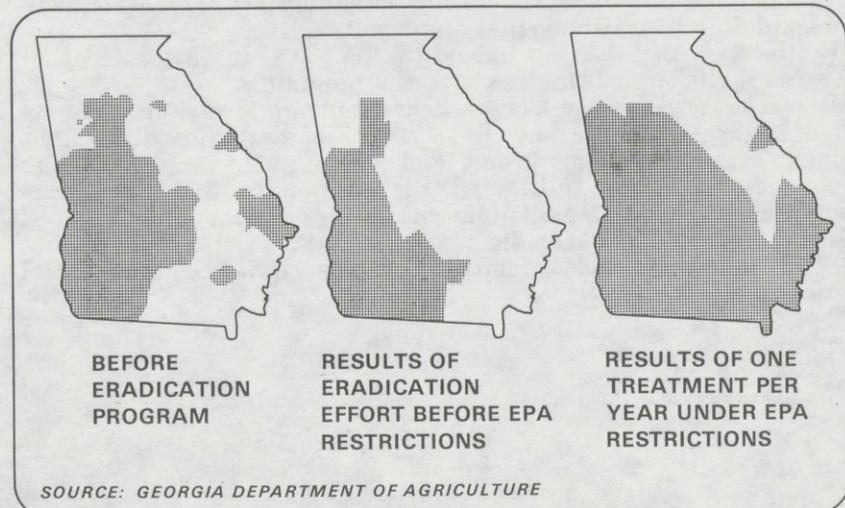
Mr. CAMPBELL. I will. There were three or four additional pages of my testimony to which I did not refer which are submitted for the record if the chairman agrees.

Mr. DE LA GARZA. We would certainly appreciate that. We are very interested in having your Georgia program as to what you did and how successful it was, including the maps of the area showing the extent of your eradication.

Mr. CAMPBELL. Mr. Chairman, we shall submit that for the record.

[The above referred to maps follows:]

### EXTENT OF FIRE ANT INFESTATION IN GEORGIA



SOURCE: GEORGIA DEPARTMENT OF AGRICULTURE

MR. DE LA GARZA. We need to clarify for the record, Mr. Campbell, at least from your side, the following: Do you have copies of Mr. Quarles' statement?

MR. CAMPBELL. Yes; I do.

MR. DE LA GARZA. On page 4 he says "The USDA itself came to acknowledge the failure of the eradication approach." Which statement does this refer to? Do you recognize the quote?

MR. CAMPBELL. Mr. Chairman, first I would like to say that to my knowledge at no time has the USDA, since a real program was begun, ever acknowledged that eradication was not possible. We have never acknowledged that. We always thought eradication was possible.

There were several years in the beginning stages when answers had to be sought, research done, when money was being expended to give relief. However, after a meaningful program was begun USDA never doubted the fire ant could be eradicated.

As to the quote, I would like to ask Dr. Mulhern, who has been with the Department throughout this entire effort, to answer this question. I came on in January of 1969 and previously was with the State of Georgia.

MR. DE LA GARZA. My concern with the quote is that in the statement it states "USDA itself acknowledges failure of the eradication program."

MR. CAMPBELL. I do not think that is a true statement.

MR. DE LA GARZA. Then in the quote it goes on to state that an opinion was given that such a program was not then feasible. That is why I wanted to reconcile the original statement of Mr. Quarles with the quotes from someone in the Department.

MR. CAMPBELL. The quote is not from me, Mr. Chairman.

MR. DE LA GARZA. I mean someone in the Department.

MR. CAMPBELL. The USDA never has thought that eradication was not possible inasmuch as we had a meaningful program started back in the late 1960's. This is illustrated by the maps of Georgia.

I don't know where the quote came from. Dr. Mulhern might know.

DR. MULHERN. It might be included in our environmental impact statement. However, I think that the point here is that it was not infeasible. In 1971, there was an injunction against the Department in regard to our environmental statement.

By the way, that was not upheld by the court. It was hinted that there was a challenge being made to the program.

However, as Secretary Campbell has said, we always believed we could eradicate the fire ant. But because of the climate of public opinion at that particular time, and which we have continued to experience since, we anticipated the restrictions that have been placed on the Department. This is what made eradication not feasible, not the technology of eradication.

[The following was submitted by the U.S. Department of Agriculture:]

## CLARIFICATION OF QUOTATIONS

Following is the full text of the quotations contained in Deputy Administrator Quarles' statement with respect to the USDA position on fire ant eradication. Material omitted is in brackets.

From page 12, 1971 USDA Environmental Impact Statement:

[As pointed out above,] an eradication program for the 126,000,000 infested acres has been considered and rejected.

In this quote, "above" refers to the following, on page 6 of the same 1971 Environmental Impact Statement:

Although the studies showed that with current technology the imported fire ant could be eradicated, a decision was made that such a program was not feasible at this time. The decision was based on the inability of the States to support the program financially and problems of logistics that had not been overcome. There were questions raised that required answers concerning the effect of such a large-scale use of pesticides on the environment.

A substantially similar passage appears on pages 7 and 8 of the USDA 1972 Environmental Impact Statement, which seems to be the source of the second half of Mr. Quarles' first quotation:

Although [these] studies showed that the imported fire ant could be eradicated with current technology, a decision was made that such a program was not then feasible. [The decision was based on the inability of all of the affected States to support the program financially and problems of logistics that could not be solved. There were also questions that required answers concerning the effect of such a large-scale use of pesticides on the environment.]

The second quotation, from page 47 of the 1972 USDA Environmental Impact Statement, says:

1. The goal of the Department [in imported fire ant control] is to react [to the demands of the States and local interests] in reducing massive infestations to a manageable level.

Mr. DE LA GARZA. Mr. Quarles, can you expound further? You have the quote and then you later state in 1972 this was again echoed in the environmental impact statement.

Mr. QUARLES. That is correct. First, I would like to point out that there is an important distinction, as Mr. Mulhern has just said, between the question of whether it is not feasible to carry out an eradication program or whether for some other reason it has been rejected.

It was not a USDA document that I quoted to the effect it was infeasible. That was the National Academy of Science report, the 1967 document. I shall submit a copy of this for the record although the copy I have personally is a rather poor Xerox. The report stated that after considering all available information the committee feels that an eradication of the imported fire ant is not now biologically and technically feasible.

The document I quoted from in regard to the Agriculture position is dated March 17, 1971, entitled "USDA Environmental Statement." That was prepared by USDA and that statement did not state it was infeasible. That simply stated that an eradication program for the 126 million infested acres has been considered and rejected. It does not say it cannot be done. It merely states it was rejected.

Mr. DE LA GARZA. Without any implication whatsoever, have you taken out of context and left material which might or might not be favorable out?

Mr. QUARLES. I don't think so. I would be glad to have the record supplemented either by us or you or by USDA. What I am trying to testify to is my understanding that the USDA position in 1971 was that it was not running an eradication program, that it had considered that and rejected it, and what it was running was a control program.

That is quite separate of the question of whether it would have been feasible to run an eradication program. In that case I quite sure I am not taking anything out of context.

Mr. DE LA GARZA. We don't want to play with words here. USDA itself came to acknowledge the failure of the eradication program. That may be just your opinion or the opinion of EPA, but it is not nice to say things about people quoting from somebody else.

Mr. QUARLES. Perhaps the straightforward way to do it is to ask these gentlemen from USDA whether they feel that the eradication program they were running at that time was a success.

Mr. DE LA GARZA. Mr. Campbell just testified that they are completely satisfied that it can be eradicated. This is without going into costs and whether Congress will appropriate the money, and so on. It can be eradicated.

Don't let me get into that. Say again what you told us, Mr. Campbell.

Mr. CAMPBELL. Mr. Chairman, at that time there were a lot of conversations carried on between the Department of Agriculture and the people in the new agency, EPA.

Mr. DE LA GARZA. I do not mean as to whether you decided to postpone, I mean about the quote, "USDA came to acknowledge the failure of the eradication approach." Is that true or not?

Mr. CAMPBELL. No; that is not true. We have never said that because we know the fire ant can be eradicated. In fact, I will state for the record that at about this time, I would have to check and supply

the exact date for the record, but I think it was in late 1972, in making up—

Mr. DE LA GARZA. You can clarify that.

Mr. CAMPBELL [continuing]. In making up the U.S. Department of Agriculture budget, we in our conferences substantially increased the funds for the fire ant eradication program.

However, when we saw we were totally limited to one treatment, I called the Budget people and told them to take that extra money out because it would be wasted.

Mr. DE LA GARZA. That is understandable. The other part is conjectural, as to what someone else has said. However, we have clarified that statement.

Mr. Quarles, USDA, speaking through Mr. Campbell, the Under Secretary, states that there can be an eradication of the fire ant. That does not consider whether they can get the money and the position of Congress.

Mr. Quarles, in your statement on page 10 you state:

I can also assure you that at no time since I have been in the office has the Department requested that EPA lift the current restrictions so that the ant could be once and for all eliminated.

That is on page 10 of Mr. Quarles' statement.

Mr. QUARLES. Yes.

Mr. DE LA GARZA. Have you anything to add to that, Secretary Campbell?

Mr. CAMPBELL. Well, Mr. Chairman, the statement having been made that we would be limited to one treatment I would have to say for the record that I have personally talked to, but not in any official documents, I have personally talked to high officials in EPA verbally and told them there were choices, just as Mr. John Quarles has related, one, two, and three. It is a very tough law that the Administrator and the Deputy Administrator of EPA have to administer, Mr. Chairman. There are well-financed groups ready to take them to court any minute, anyhow, on practically any day to uphold the viewpoints of those groups.

However, I did state to them that of these three options they should either take the first or the third option, the first one being mirex, the third being to allow us to run a program which would be a meaningful program, which would be eradication.

The No. 2 option—control—was totally unacceptable.

However, these were not official requests written on paper, but verbal conversations.

Mr. DE LA GARZA. Mr. Quarles says on page 15, "Perhaps a joint EPA-USDA study should be undertaken to address this point."

That is in context without future use of mirex. Do you think that perhaps this might be helpful, Mr. Secretary?

Mr. CAMPBELL. I am not certain what he meant by a study. We feel all the research and study has been done.

As far as cost is concerned, which was brought up by Mr. Quarles, I don't know why that falls within the province of EPA. Costs fall within the province of the program agency, and I think EPA oversteps its bounds when it brings up costs.

I apologize to Mr. Quarles for bringing this up, but EPA delayed the Alaska pipeline and the cost escalated tremendously during the period it was held up.

If we go into an eradication program the cost will be much higher later because the ants are spreading all the time.

We do not know of any additional studies that need to be made. We think that in the United States Department of Agriculture we have researched everything. We know what it costs. It does not have to be studied. It is approximately 60 cents per-acre per-treatment. It requires three treatments. That is \$1.80 per acre.

Given an outside figure of \$2 per acre we already know the cost if you want to use a very liberal figure of \$2 per acre.

We know of no additional studies or research that need to be done. We in the program have already done this and we think we have proven the answers.

Mr. Quarles may be referring to something I know nothing about but we think we have the answers in the Department already.

Mr. QUARLES. If I may comment now.

Mr. DE LA GARZA. Yes.

Mr. QUARLES. The point that I am attempting to set forth is that we currently have in effect restrictions on the use of mirex which were established through a regulatory process after recommendations by an advisory committee acting under the pesticide law. We have no legal authority to modify those except in accordance with legal procedures which would require a further public hearing and other procedures to be followed.

In the event that we were to consider major changes in restrictions of the sort which, from the personal discussions I have had with Mr. Campbell and the general understanding I have, would be required for eradication, then we would have to do a balancing of the benefits and the costs.

In order for us to assign benefits of eradication we would have to have some statement of what those benefits would be and some reasonable basis for assuming that those benefits in fact would be achieved. In other words, simply to call a program an eradication program does not make it an eradication program and would not, under legal standards we are subjected to justify the withdrawal of restrictions which currently apply.

So what I have in mind as being the type of thing which has to be faced is to develop something which is not just conversation over the telephone but is at least a plan on paper which would be a fairly serious and complete proposed program for eradication of the fire ant which would outline where the applications would be made, over how long a period of time it would be required, and in what amounts, as well as giving us something we could really evaluate.

We have nothing to evaluate. One of the concerns that I have is that as I sit here and say we are openminded and will evaluate, I think possibly Mr. Jones walked out of here thinking that means we will approve. It does not mean we will approve.

All I am saying is that we cannot even begin the evaluation of the Department's plan and program until we have something before us which sets out at least in some detail what it is talking about.

Mr. DE LA GARZA. He left here very happy. I hope you don't "unhappy" him down the line.

We might be having, again with all due respect and I am just trying to get this all in the record so we know where we are and what we can do, but perhaps we have had a communication problem. I know your agency and we have had communication problems, Mr. Quarles.

Mr. QUARLES. Yes.

Mr. DE LA GARZA. That is admitted on both sides.

Now we bring in the Department of Agriculture.

You state at the bottom of page 10:

We believed that our orders were consistent with USDA control plans, and that we were not unduly interfering with the adequate control of the pest while at the same time trying to avoid environmental contamination.

Mr. QUARLES. That is right.

Mr. DE LA GARZA. We take that statement in good faith. You did not understand what USDA was telling you or perhaps they did not make it clear to you. Now that you are both here, what happened?

Mr. QUARLES. Would you ask Mr. Campbell to tell whether he thinks they have been running an eradication program or control program?

Mr. CAMPBELL. We have not been running an eradication program.

Mr. QUARLES. That is my point.

Mr. CAMPBELL. We did have a control program in one State—

Mr. QUARLES. Eradication.

Mr. CAMPBELL. That is right. We have an eradication program in one State. The eradication program that we operated in the past has not been uniform in every State at the same time. It is impossible to have all the State legislatures meet at the same time or appropriate the money necessary. In order to have enough State moneys the ant had to spread far enough and become severe enough for some of the States to put up the money, which they have subsequently done.

It is very interesting to note that States put up the tremendous amounts of money they have. If there has been difficulty in communication we will plead guilty to whatever deficiency there has been on our side and we will promise both EPA and this committee that henceforth we will be very straightforward and on paper with signed documents and deliver to EPA everything they wish with regard to information on our desires.

Mr. DE LA GARZA. I think it would be wise. It should be in writing and all documented. As far as I am concerned they might have been well-meaning statements but with different interpretations.

Why not sit there and visit for about 10 minutes and let me go vote again.

[Recess taken.]

Mr. DE LA GARZA. We will resume the hearings. Again I apologize and again hopefully this is the last time.

Mr. CAMPBELL. Dr. Mulhern has a statement he would like to make with regard to the point we were discussing at the time we recessed.

Mr. DE LA GARZA. We would be pleased to hear you.

Dr. MULHERN. In regard to the statement of Mr. Quarles, I can assure you that this agency was under the impression that USDA was striving to achieve a control of the ant.

There is varying quality of control in the problem under discussion. You can have very little control, medium control, or maximum control. EPA has scientists, I feel, equal to ours, and scientists who know this ant and know the effects of one treatment.

There is no doubt in their minds as to the effectiveness of one treatment. Therefore, I don't think there was any misunderstanding as to the quality of control we were getting.

I am surprised if there is a misunderstanding on our lack of feeling that what we were getting was a worthwhile program because if we go back to 1971 our scientists have been in contact with each other all the time. We are well aware of what you can get from one treatment, two treatments, or three treatments.

I think regardless of what has been said about the quality of the control program and whether we were aware of it, it is unbelievable that both sides were not aware of the limited benefits we were getting from one treatment.

Mr. DE LA GARZA. Very good, sir. Are we agreed on that, Mr. Quarles, as to what we know with regard to control and eradication, what one treatment can do, what two treatments can do, what three can do?

Mr. Quarles. There is a large measure of agreement. Certainly there is agreement that two applications will achieve a vastly improved degree of control over one per year. As I point out in my testimony, page 14, we have agreed to abandon the one-treatment-per-year requirement at the urging of all of the States.

The statement on page 10 did not really go to that point. What that statement was directed at was the underlying question of whether the Agriculture Department at that time was running a control program of some sort or an eradication program. All I am saying is the point I made before, that at that time they were not running an eradication program but were running a control program.

Mr. DE LA GARZA. We have cleared that up.

Mr. QUARLES. Right.

Mr. DE LA GARZA. You did not have communication as to what was control and what was eradication.

Mr. QUARLES. I hope it comes to rest on this point. Namely, the reality is that they were running a control program. In the absence of some communication to the contrary it was reasonable for us to assume that is what they were continuing to run.

Mr. DE LA GARZA. Now you know.

Mr. QUARLES. Yes, I know what?

Mr. DE LA GARZA. That they were not saying eradication when they were limited to what control they might have. Finally they said this is not effective, so dump the whole thing.

Is that correct, Mr. Campbell?

Mr. CAMPBELL. Yes.

Mr. QUARLES. Right.

Mr. DE LA GARZA. You did not answer my question. Are you agreed that you said two is better than one? Might I interject that three is better than two?

Mr. QUARLES. As I understand it, there is a lot of debate on the question of whether three applications are advantageous in relation to two. Certainly it has to be true that a third application—

Mr. DE LA GARZA. Forgive me for interrupting. We are speaking completely and solely of the ant and the effect that the insecticide has on it. It has nothing to do with any outside effect.

Mr. QUARLES. In other words, for the moment, to disregard the environmental effect and simply ask, "Will you kill more fire ants with three rather than two?"

Mr. CAMPBELL. Or kill all of the fire ants.

Mr. DE LA GARZA. The laboratory question as to how many applications and what period of time can completely eradicate them.

Mr. QUARLES. All right. There has been a substantial amount of testimony by people who have, I believe, high scientific credentials that even with three applications you will not achieve eradication.

I know that Mr. Campbell believes that with three applications you will achieve—

Mr. CAMPBELL. I have proven it, if I may say so, Mr. Quarles. I can submit for the record information on that point.

Mr. QUARLES. I think there is conflicting evidence. It is a very complicated question. I will say that Mr. Campbell has some direct personal knowledge and I do not. I frankly know him better than I know anybody else who is dealing in this and I have a lot of respect for his judgment of this.

However, people who have been running the hearings have heard a lot of testimony from people who say that you will not be able to succeed.

Mr. DE LA GARZA. The occupant in the chair has seen some very impressive documents from Mr. Campbell as to what was done in Georgia. If you had those in mind I would hope you will check them. I think we asked they be supplied for the record.

Mr. CAMPBELL. All of the field trials on one application, two applications, and three applications have been published. We have been through that in the Department of Agriculture. We are the operating agency.

We will supply those published documents as to the effectiveness of three treatments versus two treatments if the committee would like us to do that.

Mr. DE LA GARZA. I think it would be helpful to have them for our records.

["Imported Fire Ants: Eradication Trials with Mirex Bait," vol. 66 no. 3, Journal of Economic Entomology, is held in the subcommittee file.]

Mr. CAMPBELL. I would like to point to the map, if I may.

This larger area in the east is Savannah, Ga. When we were challenged as to whether or not fire ants could be eradicated this isolated area was away from the massive infestation over on the southwest part of the State.

We went in with a very controlled program of three treatments and eradicated the ants. They stayed eradicated in this particular area for several years until we had to go back to one treatment.

You can see the second map where they had been eradicated. Then the third map shows how the ants moved back in after we had to go to one treatment. Here is our proof of eradication of fire ants from over 3 million acres which verifies what we found out in the trials. This is a field application of those trials on research.

Also, Mr. Chairman, you see this area—not only did we eradicate there but all of this white block here which previously had been infested.

Mr. DE LA GARZA. Let the record show that where the Secretary pointed it was the area surrounding Savannah, Ga., which is part of the first map of the exhibit which will appear in the record. The second area would be the second map which appears in the record. This shows all of the areas surrounding Savannah completely cleared.

The third map then shows reinfestation back across the State towards Savannah.

[The maps referred to may be found on p. 33.]

Mr. DE LA GARZA. Chairman Poage has joined us. He has a great interest in this problem.

If the Chairman has any questions at this time or any statements on this problem I shall yield to him.

Mr. POAGE. I came here because I am interested in this subject. I have looked at some of these pictures of infestation in the pastures.

The EPA has established regulations. I am not criticizing the regulations. I am not quarreling with not destroying the natural beauty of our land, the sod, and so on, if it is done by man for some worthy purpose, some purpose of improving the economy of the country, it seems to me that EPA finds any disturbance of the soil is somehow something which detracts from beauty.

When it is done by 10 million of these ants, when they bring out a similar quantity of sub-soil, gravel and sand from below, and pile it up in the pastures, it seems to be perfectly acceptable. I cannot quite understand the rationale there to make that distinction.

Mr. QUARLES. I can only say that I think those statements are just reversed. I would not agree with the first statement nor would I agree with the second. I do not mean to accept the characterization that we think it is bad when things are done for productivity for economic and cultural advantage, and we certainly do not think it is good when the fire ants create infestation.

We are in full agreement with you, sir, and the others that the fire ants present a severe problem. If there is a way to eliminate that problem which is not creating greater problems, then we want to see that done.

Mr. POAGE. Does that not get down to the question of which is more important—use of our lands or availability of crabs? Is that what we are trying to decide?

I realize we have to make some compromises between our economy and ecology in order to maintain an even balance. I know we have to make some sacrifices.

However, I know that if we make too much sacrifices of our economy we will not be able to maintain any ecology at all, none of it, because we will not have the resources with which to do it. Therefore there has to be some compromise ground.

I know there are differences of opinion as to the value of these things. I take it that you folks feel it is more valuable to the country to maintain these crustaceans, and they are mainly blue crabs, as I understand it, along the lower Atlantic and gulf coasts, and that is what we are talking about now. We are not talking about clams of New England, nor the lobsters of Maine, or anything of that kind. We are talking about the southern coast.

Mr. QUARLES. Yes.

Mr. POAGE. That is the only thing involved, is it not?

Mr. QUARLES. Yes; along a lot of that coast the shrimp represent an important part of the economy.

Mr. POAGE. Wait a minute. Those shrimp do represent an important part of the economy after you get as far west as Louisiana, but there are mighty few shrimp taken off South Carolina or Georgia. Is that not right?

Mr. QUARLES. There are some.

Mr. POAGE. I am sure there are some, but—

Mr. QUARLES. I cannot speak as to the relative importance of the commercial fisheries along South Carolina, Georgia, Alabama, and Mississippi.

Mr. POAGE. Most of the shrimp are off Louisiana and Texas coasts.

Mr. QUARLES. What I meant is that there is potentially a commercial fishery aspect of this which is involved on which the lives of a number of people depend. There is that on the other side.

The big question here obviously is whether there is some risk from mirex in causing cancer. That is something where there is conflicting evidence, incomplete evidence. The concerns which we are forced to balance in regard to mirex and the fire ant are not esthetic versus economic concerns. They are health and economic concerns on one side versus health and economic concerns on the other side.

The fire ant is a very severe threat, as Mr. Campbell has pointed out, not so much to agricultural values but to people and their health. You have that on the one side, and on the other side you have the question of if you use mirex extensively in an effort to eliminate the fire ant will that have an effect of hurting the economic activities which are dependent upon commercial fisheries or recreation along those coastal areas; and, second, are you creating a cancer hazard?

Mr. POAGE. I know that in everything we eat we face that threat. I do not mean to minimize it because I know it is perhaps the second largest killer we have.

I don't know of anything I eat that does not contain a potential cancer threat. Nobody can tell me what causes it, but they cannot tell me it will not cause it and therefore we assume it is dangerous and we must do whatever would take care of this threat.

I have no way of disproving all this. I cannot tell you that mirex will not cause cancer. I cannot say fire ants do not cause cancer. They might be the cause of cancer, too. You cannot disprove it. You cannot prove that the fire ant will not cause cancer any more than I can prove that mirex will not cause it. I will not attempt to prove mirex will not cause it because perhaps it will, and perhaps fire ants will cause it, too.

However, I think we have to take one practical thing into consideration which does not seem to be considered at all. You are proposing, if I understand it, to spread  $x$  amount of mirex every year for  $y$  number of years on into infinity, and never achieving anything other than a rather partial control. You don't have to go into infinity. But the time you have gone through the first century you have killed a lot of shellfish and shrimp and all of those things. You have endangered a lot of people and subjected a lot of people to the possibility of cancer in the first few years.

However, the Secretary of Agriculture tells us that if we will use three applications per year it is possible within 2 or 3 years to get rid of these fire ants. Maybe you will use nine times as much. If you ran 3 years you would be using three times as much as you would use, anyway, and mighty soon you will reach a point where you are subjecting us to more danger from the mirex than the Department of Agriculture is because Mr. Campbell's solution is to take 2 or 3 years and put this stuff on and kill these ants and then quit using it. Let the shellfish grow and let the shrimp flourish and let people get cancer from something else.

Your suggestion is to keep it going on forever but at a somewhat smaller rate than he proposes.

I think within a period of 6 to 9 years you will be endangering more people and more shrimp than the Department of Agriculture is.

Mr. QUARLES. There is a lot of what you said that I agree with, but I think there is one feature of it that is not quite fair.

Mr. POAGE. What is that?

Mr. QUARLES. I think from what I have heard today and in the last few weeks you have correctly described what Mr. Campbell's position is, because as I understand it he is advocating that we undertake an eradication program. I think you have attributed to me a position that is not at all my position. I think you have attributed to me the position that I am proposing that we continue to run the type of control program that we have, and that is not the EPA position.

Mr. POAGE. Well, what do you—

Mr. QUARLES. My position is, one, to try to clarify the past record that our existing regulations were developed and established in the context in which the program presented to us by those seeking approval was a control program, not an eradication program. We have had a lot of testimony on that and I think the record is fairly clear on that point at this stage.

Second, to say that before we can change those regulations under the laws that have been passed by Congress and the administrative procedures we are bound by, we would be required to undertake a very thorough examination of the full aspects and consequences of an eradication program. I have indicated we are fully prepared to participate in a good sane manner in doing that, but I do protest and say it is not fair to charge us with having refused to do so when it never has been presented to us with even so much as a single one-page piece of paper to tell us that that was wanted as a program.

Mr. POAGE. I do not want to charge you with anything except for what seems to me to be bad judgment.

Mr. QUARLES. On what score?

Mr. POAGE. I do not want to charge you with anything except with what seems to me to be in bad judgment in this case. My judgment may be the one in error.

I realize that is a difference of opinion as to what is the best course.

Mr. QUARLES. I am not sure we have made a judgment which could be bad on this.

Mr. POAGE. You have made a judgment that it is better to hold this down to one spray per year than it was to spray three times. You certainly made that judgment.

Mr. QUARLES. I testified that we have agreed to change those regulations in the future, and I recognize the one per year has been in effect in the past.

Mr. POAGE. You have made judgments in the past. You said you didn't know whether you made any judgments. You certainly have made judgments. Whether they were right or wrong, it is not a matter I am here to condemn you for. We all get wrong judgments, and that is what we are trying to discuss, the sound judgment.

When you say you cannot do these things, the existing law does not allow you to do them, that is what we are here for.

This is the one place you can change the law.

Mr. QUARLES. Right.

Mr. POAGE. You cannot change it anywhere else. Some of the courts sometimes get out behind the barn to change it, but I presume this is the only place you can really change the law. Maybe the law should be changed.

If so, that is what Chairman de la Garza wants to know. Should the law be changed? If it should, why and how?

It seems to me so clear that it is so much less threat to anybody, any crab, any shellfish or anything else to kill these fire ants outright and be rid of them and start with a clean sweep than it is to prolong this agony and run it all year every year. That seems to me so clear that I would feel that if you need legislative action we ought to suggest it here as to what we do need. We need this committee to make a change in the law.

When you say you cannot do this under the present law I am not questioning that. We don't have to live under the present law. We can change the law. If it needs to be changed right now is the time to do it.

Thank you, Mr. Chairman.

Mr. CAMPBELL. If we may we would like to comment on one point with which we disagree in the discussions just taken place.

Dr. Mulhern?

Dr. MULHERN. In regard to where we differ with EPA, as to the harm to the environment, they are saying that mirex will kill shellfish and blue crabs. This is based on their results in the laboratory.

Since 1958 we have been putting mirex out. I think we put it over 130 million acres. We have done everything in the world, and we have even had EPA people and research people with them trying to find harm as a result of putting that much mirex out in the environment.

We are not ready to accept the fact we will harm shrimp, or blue crabs, or shellfish.

We know the results in the laboratory tests, but the only thing they have out there is residue in these animals. However, as far as any actual harm to the animals, we have never been able to see any harm whatsoever.

Therefore, we are not taking that position. Our position does not say we don't care about the crabs or the shrimp. We have even evaluated that. That industry has been vitally concerned about this problem. There is no evidence to show we have caused any harm.

Mr. POAGE. One more comment. Maybe the problem there is that the EPA has applied the philosophy they always apply. You have proof, but you cannot prove there cannot possibly be any damage to any single individual blue crab. You cannot prove that under no circumstances will a blue crab die if the temperature is right and the winds are right, and so on.

They don't have to prove, at least if I understand the manner in which they operate all these things, they take the philosophy they don't have to prove damage. If you cannot prove this 100 percent, then it is bad. There is no working on them. They don't prove anything. They never prove anything. They just sit back and say, "You cannot prove that this does not cause cancer. You cannot prove it does not cause tuberculosis. You cannot prove that it does not cause toothaches." The fact is you can't. With all your learning you cannot prove it does not do those things.

They don't have to prove that it does. They just say you can't prove it. And you can't prove it never has killed a crab. I think that is the frustrating thing about this whole deal. EPA just sits back and says, "You can't prove it." They don't have to prove anything. All they have to do is to say that maybe it could do it. That is the end of it.

MR. DE LA GARZA. Mr. Quarles, do you have anything further to say on that? Do you have any information gathered from your own resources as to the effect on the blue crab, and so on? I do not mean witnesses at hearings nor people who come and tell you, but from your own resources and your own investigations?

MR. QUARLES. Let me say that I would want very strongly in the record to indicate that it is not the philosophy we go at these issues which Mr. Poage has just expressed, that we can just sit back and challenge and we never have to prove anything.

We have a responsibility to seek out the facts and to act responsibly on the basis of them. We attempt in good faith to discharge that responsibility.

On this particular issue of the effects of mirex, this is the very reason we began this very extensive hearing. It has gone on at great length, and there has been a tremendous amount of evidence presented in that hearing as to what the effects of mirex would be in the actual environment.

Allied Chemical, which is essentially an indispensable party in those proceedings, has indicated that if the hearings go on, it will withdraw from its participation in those hearings.

Because of the fact that we did not want the disposition of this matter to fall simply because of the withdrawal of Allied Chemical from the hearings we have been attempting to negotiate with all parties a settlement on which mirex could continue to be used.

I would like, if I may, to ask Mr. Johnson, a great deal more familiar with the evidence than I am, to speak to the question specifically you asked as to what evidence the Agency has on the effects of the use of mirex.

MR. DE LA GARZA. We would be glad to hear him. I am not interested in evidence presented by outside sources, but I want to know about your own investigations and studies.

MR. JOHNSON. The Environmental Agency has done quite a few of its own studies on the effect of mirex. We have tried to simulate, to the extent we could in the laboratory, the natural conditions so we could, in fact, see what happens, for example, when this gets into seawater. We are also interested in what the buildup of mirex is in human tissue. As part of the human tissue monitoring program, we are interested in finding out those levels.

In addition to work which is done by us we also cooperate with other agencies, for example, utilizing data collected by USDA on environmental monitoring, though we may interpret that analysis with our own scientists. We check data from Food and Drug and USDA. There is an extensive amount of work that needs to be done in these cases. EPA by no means can get away without proving something in hearings.

When we get into these hearings, in fact even before we get into an adjudicatory hearing, we need to sustain our action with some credibility. We have to be able to show there are effects we need to be concerned about in order to go to that hearing in the first place, at

least on a probability basis. There needs to be a question as to adverse things possibly happening. We cannot just walk in and say we will take these things off the market without some evidence. Substantial question has to be raised or we will be overturned very quickly in the courts.

Mr. QUARLES. In other words, where pesticides are registered the company which has the registration has legally protected rights. We cannot withdraw that registration without evidence which supports the action, nor do we have any desire to do so.

Mr. DE LA GARZA. May I continue with Mr. Johnson for a couple more questions? Your testimony and that of Dr. Mulhern coincides. He said all your information comes from laboratory experimentation and laboratory-conducted observations. You verify this is correct.

From your personal sources, and you have not been out in the field with your scientists and doctors and observed the same circumstances out in the field.

Mr. JOHNSON. I don't know. I will have to supply it for the record. I don't know whether they have been out in the field looking for kills. I know one of the difficulties in finding these in the fields is the small size of the juvenile crab, for example, and the ability to detect when a kill takes place. When they wash out to sea they are small in size and not easily found or noticed. I would like the opportunity to see whether our scientists have in fact looked for them and found they have not gone out at all.

Mr. DE LA GARZA. We would like to have this for the record. We don't want testimony from others. This is not derogatory, but even if it is just one person's opinion it can differ 180° from the others.

We want statements of yours, what you have done in the laboratory or in the field.

[The following information was submitted:]

FIELD RESEARCH

In conjunction with the Bureau of Sport Fisheries and Wildlife, United States Department of Interior, EPA initiated a study in 1969 to monitor the movement and accumulation of mirex in the estuarine system. Mirex had been used in the Southeastern United States in a cooperative federal/state program to control the imported fire ant for five years prior to initiation of this study.

Initially, mirex was not considered toxic to non-target organisms and was used extensively in the coastal, estuarine areas. Subsequently, independent experiments in controlled laboratory studies at Gulf Breeze, Florida and Bears Bluff, South Carolina showed that mirex was toxic to decapod crustaceans, including juvenile blue crabs and panaeid shrimp. Because of these results and the concern of commercial fishermen that application of mirex to marsh areas could adversely affect the fishery resource, application of mirex to the coastal environment was suspended and the cooperative study was undertaken. EPA was responsible for design of the study, collection of samples of bottom sediment, water, shrimp, crabs, and fish and for analyzing all samples. The Bureau of Sport Fisheries and Wildlife was responsible for collecting birds and mammals.

The data revealed that mirex was translocated from treated lands and high marsh to estuarine biota (all animal classes sampled contained mirex) and that biological concentration of mirex occurred, especially in predators such as racoons and birds.

Procedures used in the study were neither capable of, nor intended to comprehensively detect mortality of aquatic organisms. However, inspection of sampling areas did not reveal mass mortality which probably would have been apparent if it occurred. Earlier laboratory studies indicated that toxic impacts would be extremely difficult to detect unless they occurred simultaneously over a large population. Symptoms of mirex poisoning exhibited by shrimp and crabs prior to death are irritability, uncoordinated movement, loss of equilibrium, and paralysis. An affected crab may live several days or even weeks after the initial exposure of mirex. Animals in advanced stages of poisoning would be highly susceptible to predation by larger carnivores or could be swept out of estuaries by tidal action. In addition, shrimp and crabs are extremely susceptible in their juvenile stage when detection is difficult. Those affected animals could be removed from the system without leaving visible evidence of their condition. Further, any dead animals would generally enter the detritus pool soon after death.

For these reasons, the EPA research into the effects of mirex in estuarine systems has been carried out in laboratory facilities at the Gulf Breeze Environmental Research Center where the natural ecosystem is simulated through flowing sea water systems. This method allows for close observation and of exposed organisms in a situation as close to the real world as possible.

The laboratory studies with aquatic life have revealed that mirex is toxic to juvenile pink shrimp when incorporated in flowing sea water at extremely low levels. While no safe level for mirex in water is known, presumably it is less than 0.01 parts per billion which exhibited toxic effects over a three week study.

EPA is continuing its investigations of mirex in marine ecosystems through experiments which allow for the transfer of mirex through simple food chains.

Mr. DE LA GARZA. The second question, and this is purely academic. I cannot understand it and perhaps you can clear it up.

The objections to mirex are for all the reasons outlined. I understand there is no objection to the ground application or to specific mound applications, and that this can be done in unlimited amounts and quantities or any time a person wants to do it. Am I correct in this?

Mr. JOHNSON. That is correct, we have no restriction on ground application except for calibration restrictions on ground equipment you can use to broadcast.

Mr. DE LA GARZA. Your objection, then, basically is not to mirex but how it is applied. You don't want the big airplanes flying high. Is that it?

Mr. JOHNSON. We are trying to keep it out of the aquatic environment. When we went into the hearing initially, the administrative hearings, those which have been discussed today, we had a choice of two types of hearings under section 6. A section 6(b)(1) hearing where the administrator makes a finding he intends to cancel the registration of pesticides prior to going into the hearing, and section 6(b)(2) hearing where he has serious question about the reasonableness of the continued use but he is not willing to make a decision to cancel at that time. In fact under 6(b)(1) he says he intends to cancel the pesticide.

In this mirex case the administrator found that fire ants were a significant problem. He found there were not well-known, nor good alternatives to mirex for a broadcast application. We went to the hearing to find out how mirex could be used to control the ant and at the same time minimize environmental contamination, particularly of aquatic areas.

At that time we had no data that I know of on the carcinogenicity question. That data was introduced as we went into the hearing.

At that time the hearing was started not to withdraw mirex, because we thought it necessary to control the fire ants, but to minimize contamination.

Mr. DE LA GARZA. Taking Mr. Quarles' suggestion that perhaps a study is needed, perhaps what we need is one of these pilot projects we always hear about, away from any water.

How long does it take, Dr. Mulhern, if you use three applications?

Dr. MULHERN. Ten to fifteen months. Fifteen months maximum.

Mr. DE LA GARZA. To keep it free of the fire ant would you have to have subsequent applications?

Dr. MULHERN. Generally the results in Georgia which are published indicate that three applications they eliminate the fire ant.

We feel if you were going to do it in other areas it might be necessary after three treatments to go in and treat some localized areas. There is a possibility that if you try to do it throughout the entire infested area in some cases you would need a mopup.

We are very convinced in most of the areas three treatments would do it.

Mr. DE LA GARZA. Anyone who can answer now—in the citrus area where I live, fire ants are all the way down to Jim Hogg County and Kleberg County. Some of the applications of pesticides and insecticides is done by airplane, mostly single-engine airplanes.

Some areas have applicators they put on the backs of trucks. You have no objection to that?

Mr. QUARLES. No, there are no restrictions in effect now which prohibit application on the ground from a truck other than the calibration of the sort Mr. Johnson referred to.

Mr. DE LA GARZA. We will have to study that. I know it would take a lot more time with a truck than with an airplane. That is something for us to look at.

Let me tell you, Mr. Quarles—were you bitten by one or many?

Mr. QUARLES. I was bitten by one—well, three or four, I guess.

Mr. DE LA GARZA. In a laboratory experiment?

Mr. QUARLES. This was not a scientifically controlled laboratory experiment.

Mr. DE LA GARZA. Was it by accident?

Mr. QUARLES. I thought I should be bitten so I would have had the experience.

Mr. DE LA GARZA. I have seen some of the people who have fire ants in their backyards. If you get them all together, and it looks as though we might eventually, they might be in a situation where they could very seriously see that you are bitten by many more.

They did not mention you by name but they said, "That guy up there, maybe we should tie him to a mound of fire ants."

Mr. CAMPBELL. I have been bitten by but one fire ant. Don't send them to me. I have a better record than Mr. Quarles—I have been bitten by one only. As long as I was in Georgia I was able to stay away from them. When I went to Texas I got bitten.

Mr. DE LA GARZA. Mr. Jenrette, do you have any statements or questions?

Mr. JENRETTE. I appreciate this opportunity of being here although I am not on the subcommittee. When I saw the list of witnesses I wondered whether it would be a witness chair or a boxing ring.

I have a question. On page 10 of your statement you say that at no time have you been asked to lift your restrictions by USDA so that once and for all there could be an eradication program. I think you and I went through this in private discussion.

Mr. Campbell, were you under the impression that there had been a request by the Department for an eradication program?

Mr. CAMPBELL. We actually had an eradication program. There was one at the Department before I came to Washington. These maps illustrate what was accomplished in the State of Georgia.

At the time we reduced to one treatment there was a court injunction, and a lot of discussion going on between the USDA scientists and the EPA. We reduced to one treatment because we were told if we did not reduce to one treatment, use of mirex might be ruled out altogether. We are guilty of going to one treatment, but it was done under duress.

There must not have been good communication because EPA now says that they accepted that as the basis of their putting out their regulations.

I will not dispute that because of there was some misconception, that is how we arrived at that point. I will accept Mr. Quarles' statement as to why he thinks EPA took that attitude. On the other hand I am convinced that the scientists in EPA and Dr. Mulhern told you

that as the result of one treatment we would not have effective control of the fire ant.

Mr. JENRETTE. Is the Department prepared to ask for—

Mr. CAMPBELL. Yes, we discovered this earlier. I would be happy to repeat it. We state flatly we can eradicate the fire ant. I feel this would be the easiest eradication program I have ever participated in. I have been in many eradication programs, including cholera in hogs, vaccinating all our horses, wiping out screwworms, getting rid of Newcastle disease of poultry in California. This would be the easiest program I have ever known as far as eradication is concerned.

Mr. JENRETTE. How long would it take the Department to submit a formal request to EPA for such a program?

Mr. CAMPBELL. We can do that in 2 weeks; we can get the paperwork done. We already know what it takes. It would be a matter of putting the paperwork together on a 40-hour work week. We work overtime many times, but you pay time-and-a-half for overtime so we keep it as low as we can.

Mr. JENRETTE. How long would it take you to respond to such a request?

Mr. QUARLES. It will take just a little while to respond to your question because I am not familiar with the legalities of it. However, we will have to go through a hearing. I think we will make an extensive study.

I think I should also point out that there are a number of what we would regard as tough questions which such a proposal would raise as to the health and environmental effect we would have to undergo. As I am sure you are aware, we make a pretty thorough analysis before acting on matters

Mr. JENRETTE. I am aware it takes a long time. I am not sure how thorough.

Mr. POAGE. They said they would have to go through a hearing to make any change in this regulation. You did not have to go through any hearings—

Mr. QUARLES. Yes. We began a review of mirex in response to the court suit against the Department of Agriculture in 1970 and went through the procedures that then were called for which required considerations of the issue by an advisory committee. That committee was appointed by the Agency and undertook an extensive investigation. I don't know whether it was several months, or a half year, or 1½ years, or what it was, but it was not until 1972 that the Agency acted on the matter, so it was in the general range of about 2 years.

I am not saying it will take 2 years now.

Mr. POAGE. You didn't have a hearing, though, did you?

Mr. QUARLES. The law was different then. The advisory committee was called for, and that committee was appointed and conducted formal proceedings and reported a recommendation for the Administrator to act upon.

Mr. POAGE. Did you eliminate this because of the coyotes? You didn't have a hearing on that, did you?

Mr. QUARLES. You push my recollection on that, sir. The basic decision on the abandonment of 1080 and strychnine for coyotes, that was a White House decision made after consultation with the Department of Agriculture and the Department of the Interior.

Mr. POAGE. There still was no hearing, though, was there?

Mr. QUARLES. I think in that instance when the notice of cancellation, suspension, or whatever it was, was issued, there was no hearing called for.

Mr. POAGE. There was no hearing required to impose the ban on these other things, M-44 and other things. Now, before the law is changed, you have to have a hearing before you can take off that ban. Is that right?

Mr. QUARLES. I do not want to be evasive in responding to you, sir. These are technical and legal questions; I have not briefed myself in advance of today's session to respond to them. I will get you a response on that.

Mr. JENRETTE. Mr. Lee had been quoted by staff personnel that \$20 million a year for 5 years would be required to bring about a total eradication program. Is that correct?

Mr. LEE. That is right.

Mr. JENRETTE. I wanted that in the record. Mr. Quarles, it is your testimony that we are talking about, a half billion dollars?

Mr. QUARLES. Yes. At that time I said that my recollection of my discussion with Mr. Campbell was that he had quoted that figure to me.

Mr. CAMPBELL. Let me correct this. I don't know about the quotation from Mr. Lee, but those figures are in error. The \$20 million is in error. There are 133 million acres infested at the present time. To eliminate the fire ant would take three treatments on each acre, and a treatment currently runs 60 cents per acre. That would be \$1.80, round it out to \$2 because of the mopup in some instances thereafter. That would be \$2 per acre. You are looking at a cost of \$2 on 133 million acres, \$266 million.

Mr. QUARLES. \$260 million.

Mr. CAMPBELL. \$260 million, that is right. Of course, the time it would take depends on the dollars you got up each year to go forward.

Mr. QUARLES. My testimony before was that there would be several hundred million dollars, perhaps as much as a half billion dollars.

Mr. CAMPBELL. I don't think cost is any concern with regard to the discussion here. That is a matter for the Congress and the Department of Agriculture. I don't see that enters into the issue as far as EPA is concerned.

We in the Department did not feel we should ask for more money under the present restrictive circumstances.

Mr. JENRETTE. At the time that you took over the control of the program, take a sample crab or something of that nature, can you tell us as to the part of mirex you found in the crabs which you examined in the field?

Second, when you placed your restriction and after the restriction or the one application a year what part of mirex did you find in a similar type crab?

Mr. QUARLES. I don't know how well we can respond to that.

Mr. DE LA GARZA. Submit it for the record if it is not readily available.

Mr. JENRETTE. If you would submit that finding I would appreciate it.

[The above-mentioned documentation follows:]

EPA RESPONSES FOR THE RECORD

Two issues were raised at the June 26, 1975, hearing on mirex: (1) the level of mirex residues in blue crabs before and after EPA placed restrictions on mirex use and (2) field research which EPA has undertaken in its mirex investigations.

RESIDUES

With respect to mirex residues, three studies have been undertaken to detect mirex in blue crabs under field conditions. These studies all preceded the actions taken by EPA to restrict mirex application in aquatic areas. The results are summarized as follows:

1. A Report on the Cooperative Blue Crab Study, South Atlantic States, 1969.

A cooperative study was undertaken between the U.S. Bureau of Commercial Fisheries and the states of North Carolina, South Carolina, Georgia and Florida because of massive mortality of blue crabs from 1966-1968. Residue analyses were run for a number of chlorinated hydrocarbon insecticides including mirex. Residues were reported as:

## MIREX RESIDUES IN BLUE CRABS

Location	No. of Samples Examined	Samples % Positive	Mean	Low	High
			-----ppm-----		
20 South Atlantic Hydrologic Stations (4 state aggregate)	195	35	.076	.005	.389
North Carolina	50	16	.023	.005	.045
South Carolina	50	44	.088	.005	.209
Georgia	50	54	.162	.015	.389
Florida	45	31	.031	.005	.164

2. Levels of Mirex and Some Other Organochlorine Residues in Seafood from Atlantic and Gulf Coast States, 1971.

Carried out by the USDA, this study found mirex contamination of blue crabs in only one (near Savannah, Georgia) of seven monitoring sites within treated areas. Nine of sixteen samples in the Savannah site were positive with residues ranging from .005-.024 ppm (mean of .014 ppm).

3. Accumulation and Movement of Mirex in Selected Estuaries of South Carolina, 1969-1971.

Intensive monitoring programs were carried out by EPA, Gulf Breeze and the Bureau of Sport Fisheries and Wildlife, U.S. Department of Interior during the period 1969-1971. The study monitored the residues of mirex in a number of aquatic species as well as mammals and birds native to aquatic areas over a three-treatment sequence covering 18 months. Monitoring sites were located within and outside of the treated areas to gather information relating to movement of mirex. Results for blue crabs were as follows:

## MIREX RESIDUES IN COMPOSITE BLUE CRAB SAMPLES

Location	Mirex Residue (ppm) In Composite Sample Over Treatment Interval
Site A (Inside treatment area)	
1st application	not detected - 0.19
2nd application	not detected - 0.19
3rd application	not detected - 0.022
Site B (Inside treatment area)	
1st application	not detected - 0.24
2nd application	not detected - 0.035
3rd application	not detected - 0.049
Site C (Inside treatment area)	
1st application	not detected - 0.090
2nd application	not detected - 0.027
3rd application	not detected - 0.010
Site D (Inside treatment area)	
1st application	not detected - 0.065
2nd application	not detected - 0.098
3rd application	not detected
Station 1 (Seven miles from treatment area)	
1st application	not detected
2nd application	not detected - 0.024
3rd application	not detected - 0.026
Station 2 (two miles from treatment area)	
1st application	not detected
2nd application	not detected - 0.031
Station 3 (Inside treatment area)	
1st application	0.60
2nd application	0.27
Station 4 (Inside treatment area)	
1st application	not detected
2nd application	0.042
Station 5 (six miles from treatment area)	
1st application	not detected
2nd application	not detected - 0.025

## MIREX RESIDUES IN COMPOSITE BLUE CRAB SAMPLES (Cont'd.)

Location	Mirex Residue (ppm) In Composite Sample Over Treatment Interval
Station 6 (six miles from treatment area)	
1st application	not detected
2nd application	not detected - 0.025
Station 7 (six miles from treatment area)	
1st application	not detected
2nd application	not detected - 0.12

Verbal Summary: Mirex was not found in any background samples of crabs taken from the monitoring sites prior to treatment. Post treatment residues showed mirex ranging from 0 - 0.60 ppm in composite blue crabs samples with 31 percent of the samples being positive. Mirex did transport to the monitoring sites (A, B, C, D) from treated, adjacent areas. Although the mechanism of transport is not fully understood, surface runoff was suspected. There were location effects with more animals from treated animals containing mirex than animals taken at downstream stations. The percent occurrence of mirex was higher for crab samples than in fish or shrimp samples. Measurable levels of mirex appeared at all stations, demonstrating that tidal flushing, biological transport or some other mechanism distributed the chemical throughout the estuary, regardless of precautions taken to limit treatment in tidal zones.

No monitoring data has been generated which is specific to blue crabs since the May, 1972 imposition by the Administrator, EPA of a coastal county restriction on aerial application of mirex. The USDA monitoring data which was instituted in support of the aerial program was carried out only in treated areas. Therefore, no coastal county monitoring has taken place since 1972. As a result, no new information has been generated with respect to mirex residues in coastal, aquatic species.

Time series data which span the period between pre- and post-EPA restrictions are available for several species of fish as well as non-targets and crayfish.

Mr. JENRETTE. I read the hearing report you held last week of the proposed settlement. There are pretty stubborn farmers in South Carolina. I would like to see you stop them on a 2-acre farm from spreading mirex. How can you put controls on individual farmers not to spray a 2-acre pond?

Mr. QUARLES. That is not what is intended. The restrictions in regard to the 2-acre pond would apply to aerial application.

I need to correct myself. The ground application has a restriction in it that it not be applied over water.

Mr. JENRETTE. In 4 days any program would be over. You have no proposal to do anything further after July 1.

Mr. QUARLES. Excuse me?

Mr. CAMPBELL. No; we will have suspended our part in the program as of June 30, or July 1.

Mr. JENRETTE. The \$2 per acre is the total Federal cost?

Mr. CAMPBELL. Total cost to the State and Federal Government.

Mr. QUARLES. If I might add a point, this is extremely important which has not been brought out so far in the hearings. Your question borders on this. Throughout the afternoon we have been talking about the possibility of considering an eradication program, how long it would take, and so forth.

We do need to recognize whether it is a short period of time or a long period of time, whether an eradication program is undertaken fairly soon or never—the point you are coming to, what happens on July 1? We are concerned that the negotiation be completed that we have been laboring with to try to establish some ground rules under which program can go forward substantially on the basis that it has been applied but with the modifications that we propose which would make it more workable. This is something which has been pending before us and we need to have the participation of the Department of Agriculture in those negotiations so we can bring them to completion.

Mr. CAMPBELL. I would like to correct one thing. The June 30 date of suspension by the USDA is in the middle of the nontreatment season. The next treatment season starts in September, the most important treatment season. They do not forage during extremely cold or hot weather, so the time of treatment can be in the fall, spring, and summer in certain geographic areas, possibly in the middle of winter. On a warm day they will be out foraging, so the June 30 date is not of great significance. The next treatment would not start until September. However, that is the date of our suspension.

The question I would like to ask, and I don't know whether he can answer it—you allude to the fact that you are willing to go to two treatments. I assume that is without further hearing.

I just wondered, for control purposes, would you be in a position to go to three treatments without a further hearing just as you stated you might be able to go to two for control purposes?

Mr. QUARLES. The proposed settlement has resulted from negotiations among a variety of parties, of which we are one and several State agencies are involved—USDA, Allied Chemical, and environmental groups. The objective of all parties has been to develop a set of ground rules that would be acceptable on a temporary basis and as a basis on which the hearings will be suspended.

I cannot speak for what could be negotiated as to three applications. However, that is not part of the terms which have been negotiated and have been largely agreed to by EPA, by Allied, and by most of the State agencies. However, not by USDA.

Mr. JENRETTE. In all your negotiations there is a vital party not participating in any way whatsoever, if my information is correct.

Mr. QUARLES. That is the public.

Mr. JENRETTE. I understand USDA is not participating.

Mr. CAMPBELL. We have been an observer. Our attorney has been sitting in until the last 3 or 4 days or perhaps the last couple of weeks. However, he has been sitting as an observer.

Mr. JENRETTE. My information from your Department is that if a settlement is agreed to, USDA would not take part because it was not acceptable.

Mr. CAMPBELL. If I understand what they propose, that is true. What you have said is true.

Mr. JENRETTE. Where are we? What are we going to do about the fire ants in September? That is all I would like to know from both the head horses here. What are we going to do in September?

Dr. MULHERN. Is there an effective program available to us, a program that will do the job? Conditions we have seen and what has been proposed in the discussion we do not think would be an effective program. We cannot live with those restrictions. It is just a matter of EPA and USDA getting together and agreeing. We know their responsibilities. However, we have to have a program we can justify.

The present proposal would not be an effective program.

Mr. JENRETTE. What does that mean, that you will not participate if they meet the order they are subscribing to now?

Dr. MULHERN. Both sides are willing to discuss the problem further. Basically, they have made a proposal to us, or at least the settlement they say they have agreed upon.

We don't think that is an effective program.

They have asked us to make a proposal to them. We will make a proposal of what we think is an effective program. Then they will have to react to that.

We don't see our continuing in the program without the program being effective.

They can get into the argument of eradication versus noneradication. We will say, "Let's go for an effective program."

Mr. JENRETTE. What does that do to the pending lawsuits?

Mr. CAMPBELL. There are no lawsuits. This is not in court.

Mr. QUARLES. The situation that we will confront is as follows, as I understand it: We have been in negotiations with Allied Chemical, which is the manufacturer, and with the State agencies and others, in attempting to modify the ground rules which were applied to a control program. We have reached substantial agreement on a set of ground rules which all parties feel they could live with, although none are entirely satisfied with them.

The alternative of beginning for the first time a full-scale eradication program with substantially different ground rules is an alternative that I would not offer any promise will begin in September. In other words, I think it is highly unlikely that EPA would have completed succeeding to be able to approve a full-scale eradication program by September.

It would be our recommendation that there be in effect ground rules to permit a control program similar to what has been carried out for the last few years but hopefully more effective if the States and USAD care to carry that out.

If they feel it does not make sense to carry out a program unless it is a full-scale eradication program then I think there will be an interruption from the time when there is any program at all until there is a full-scale eradication program.

I do not mean to be unresponsive but the anxiety is to move ahead in addressing the fire ant problem. I am quite sure initiation of an eradication program would require an environmental impact statement, our conducting legal proceedings, and I think we are kidding ourselves if we think that will all be carried out between now and September.

You all could decide to cut through all this and pass a law which brushes aside the scientific, medical and other questions and just mandate the initiation of a program. However, we cannot do that.

Mr. DE LA GARZA. By further proceedings you mean the hearings now, hearings on the proposed agreement. That has been suspended pending acceptance of that proposal.

Mr. QUARLES. We are carrying out the hearing Mr. Johnson referred to before, to investigate how mirex can be used for maximum control of fire ants while avoiding damage in the aquatic environment. That hearing came to a stage when Allied Chemical determined that it would not continue with the hearing unless an agreement could be reached.

We thereupon began negotiations to work out an agreement.

Mr. DE LA GARZA. We thank you gentlemen and your colleagues for being here. I hope we have achieved some degree of communication between your two agencies and ourselves. Hopefully we can further communicate. You do likewise.

It is quite disturbing to hear at the end of the hearing that nothing can be done by September, which means another year of fire ants all over the place.

Nothing is impossible, Mr. Quarles. Everything is possible. We would urge you, then, to try because we are in a position, and you made the statement, I hope not as a challenge, that we can just do away with the law. That is not the intent of the Congress nor this committee, to disregard any environmental effect on the ecology. Everyone is interested in doing that, but we want to be able to help those people who have problems within a reasonable scope and to satisfy both sides.

Some of us are more reasonable than others. One person may be interested in one little crab. The other may not give a darn for it. Therefore, your Department, USDA, and we have to try to set a happy balance somewhere.

However, there is a tremendous sense of urgency from the people. The reason we asked you here, and I say this very frankly, people don't vote for you and they don't vote for Mr. Campbell. They vote for us. They are after us every day—what are you doing about fire ants? It is also about other things, but they are very disturbed about the fire ants, because they are completely frustrated. They don't understand the intricacies of Government. They don't understand the intricacies of EPA, hearings, and so on. All they know is that

there is a mound of fire ants. You have seen them. Mr. Campbell has lived with them.

Mr. Campbell says that he has personally seen how they were able to eradicate them from an area of Georgia without any apparent damage. We would like you to look into that with—not a sense of urgency—but more urgency than you have displayed up to the present time.

We know all of you are trying to do your jobs. We have no quarrel with that. We know that you are conscientious and dedicated public servants. There is no quarrel with that.

All of us can be making more money in private life, I am quite sure. Therefore, that is not the problem. The problem is that the people want something done. We have to moderate one against the other.

As we say in south Texas, let's go to it.

Mr. HOGAN. Might I ask a question?

Mr. DE LA GARZA. Yes.

Mr. HOGAN. You indicated you have agreed to ban the current one treatment and go to two applications. It was not quite clear from your response to Mr. Poage whether you can do that without hearings, as an executive judgment as it were.

Mr. QUARLES. The procedure which applied there is that if all parties would agree to this, or at least agree not to object to it, then the expectation is that a document would be signed by all parties recommending to the hearing examiner who is running the adjudicatory hearing that the hearings be suspended and that the attached revision be adopted. Then the hearing examiner would be responsible to consider that.

If he approved it he would recommend that to the Administrator and the Administrator could adopt that within the framework of the existing adjudicatory proceeding.

Mr. HOGAN. Let's assume the Congress were to make a finding that the existence of the fire ant and the growth and spread of the fire ant constituted in and of itself an adverse effect on the physical environment and to humans so that EPA would have to overcome that presumption in order to restrict the use of mirex or some other chemical which the Department of Agriculture could use for the purpose of eradication. Is the technical and scientific evidence such in your opinion in this case enough to overcome that presumption?

Mr. QUARLES. That would depend on how the presumption was phrased and what was applied to overcome it, combined with consideration of the technical information itself. I am certainly not expert enough to speak on that.

I know there is a greater body of information that supports the concern of the possible carcinogenic effects and other effects.

I would be glad to work with you as you consider alternatives of that sort, but I don't think I can respond off the top of my head to a question like that.

Mr. HOGAN. You don't know what the mass of scientific and technical knowledge is in the hearings so far, the weight of it, as it were, to overcome a presumption such as that?

Mr. QUARLES. No. It would be inappropriate for me to speak on it in any event because it is an administrative proceeding. It is before a hearing examiner. It is his responsibility to weigh that evidence and make a semijudicial finding upon it.

Mr. HOGAN. Then certainly do not answer.

Thank you, Mr. Chairman.

Mr. DE LA GARZA. We thank you, gentlemen. We will recess this hearing and continue oversight. Hopefully we will have, in the not too distant future, further meetings where we might have Mr. Jones of North Carolina, kept as happy as he left here this afternoon.

We will recess subject to the call of the Chair.

[Whereupon, at 5:20 p.m., the subcommittee adjourned.]





