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The Men Who Can Poison the World

The man who is laughing has not been told the terrible news
Bertold Brecht

Harry Hays, as Director of the United States Department of Agriculture's Pesticides Regulation Division, controlled the procedures by which some 13,000 commercially registered products were unleashed on various types of pests and on the world as well. But, during vivid cross-examination by Yannacone—the high mark of his Madison performance—the public learned from Hays the terrible news; those official procedures offered almost no protection at all against toxic pesticides.

Hays's direct examination was conducted by Kenneth Robertson, a U.S. Department of Agriculture attorney, appearing as intervenor in the hearing. Throughout, the testimony was uneventful and bland. Its content seemingly revealed the phlegmatic nature of the Pesticide Division's day by day existence; the functional, if not dull and simple, quality of the processes necessary to protect the public against pesticides.

Mr. Robertson: Dr. Hays, you stated you are the Director of the Pesticides Regulation Division. Will you please state the functions of that division?

A: The function of the Pesticides Regulation Division is to carry out the provisions for registration and enforcement pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act [FIFRA].

Q: Dr. Hays, will you please set out or state the procedures that are followed in connection with registration of an economic poison pursuant to the provisions of the FIFRA?

A: . . . The two primary functions in the Act are registration and enforcement, and we have in the Pesticides Regulation Division a Registration Branch and an Enforcement Branch.

Now under the Registration Branch we have a group of registration specialists as well as a staff of competent scientists in the various areas of disciplines involving pesticides. To register an

economic poison, the applicant must first submit a formal application for the economic poison; he must submit a proposed label, a statement of the chemical composition of the product, and effectiveness data and safety data in support of the application.

The application and the data are first reviewed by what we call the New Chemicals Evaluation Staff. The chemical composition is reviewed for its accuracy: the ingredients statements, and the proper nomenclature, the net content, and the product name. The application, the label, [and] the data are then submitted to what we call the Product Evaluation Staff. Here we have a group of entomologists, agronomists, plant pathologists, bacteriologists, animal biologists.

In general the criteria that are used (that have been submitted to me by the professional people) include such things as the pest to be controlled, the dosage and the rate of application, *phytotoxicity*, metabolism, migration, translocation, and persistence. From this they then review very carefully the directions for use as proposed by the applicant to see whether or not the product, used in accordance with the directions of use, would in fact be effective.

The data and the label and the chemical composition are then submitted to the Safety Evaluation Staff. Here again the staff is made up of specialists in biology and toxicology. They review the data submitted in support of safety insofar as the directions for use. This would involve, in general, such things as the oral, acute oral, dermal, and inhalation toxicology; subacute studies designed primarily to determine if the product has cumulative effects; [and] subacute feeding studies. Eye and skin irritation is a very important part in terms of the applicator, [and] such things as sensitization, reproduction, and carcinogenicity tests.

Now from this it is possible then to determine what signal word would be used on a pesticide container. There are three principal words: "Danger," "Warning," and "Caution." In addition, the data in support of safety would provide a means of determining what precautionary statements, when complied with, are adequate for the protection of man and vertebrate animals. . . .

If the product is to be used on food or feed crops and there is a likelihood that a residue would remain from such use, this matter is transmitted to the Food and Drug Administration for the establishment of a tolerance. This usually involves a very extensive petition, considerable data on feeding, and long-term studies for evaluation by the scientists in Food and Drug.

When all of the review has been completed by each of the individual staffs, it is then reviewed in its entirety by representatives of each of these divisions so that we can take a look at it as a whole. If the data appear to us to be adequate, or to our scientists, and all provisions of the registration have been met,

the product is registered. If, on the other hand, the data do not appear to be adequate in support of effectiveness or safety, the applicant is so notified of the deficiencies and the need to submit additional data.

In 1963 the President's Science Advisory Committee recommended in its report on the use of pesticides, that other departments in the government should be consulted [so they might] provide information and advice to the Pesticides Regulation Division prior to registering any product. In 1964 there was drawn up what is known as an interdepartmental agreement which was signed by Secretary [of the Interior] Udall, Secretary [of HEW] Celebrezze, and Secretary [of Agriculture] Freeman.

This agreement states that all labels, all proposed labels, applications should be referred to the proper agencies within those departments such as Welfare; to the Food and Drug Administration; to the Bureau of Veterinary Medicine; and to the Department of the Interior for review and advice as to the adequacy of the labeling and the adequacy of the data in support of the registration. This has now been in effect since 1964. Applications are submitted to the interdepartmental groups on a daily basis; we receive their advice; we take their advice seriously in terms of the adequacy of the labeling to protect the interests of the public health aspects and fish and wildlife.

Now the second important activity, of course, in the Federal Insecticide, Fungicide, and Rodenticide Act is the enforcement. And so we have under constant surveillance an inspection system [designed so] that our inspectors, who are located in various geographical areas of the United States, will collect samples of the products that have been shipped in interstate commerce. I stress again interstate commerce.

These samples are submitted to the laboratory for biological testing, and results are sent to the Washington office. If the product is found to be in violation of the Act, is misbranded, it is then subject to criminal prosecution.

For the protection of the public, we have in this past year sampled over 8,000 products that have been shipped in interstate commerce. [They] have been sampled and analyzed by our various laboratories.

In addition to the general functions of the division, we have, of course, a departmental committee on pesticides in the Department of Agriculture. . . . We get information from this committee as well [on] the research activities that go on within the Department of Agriculture. There is [also a] Federal Committee on Pest Control that [has representatives from] many agencies in the government that review[s] the federal programs before any are implemented. We also have a very close working relationship with the state officials under the Association of the American Pesticide

Control Officials, with our primary aim to have as uniform procedures and registration and enforcement as possible. We have in the past two years met with representatives of the states at some eight regional meetings to discuss our problems at both the federal and the state level. We believe this has been a very important part of our regulatory function.

That, I believe, Mr. Robertson, states our procedure.

Q: Dr. Hays, you set forth the procedure in connection with submission of data, and review of all that data, to support the registration of an economic poison.

Is there any provision for canceling the registration of an economic poison?

A: Yes, Section 4.c. of the Act provides that when the Secretary deems it necessary to cancel a registration, he shall so notify the registrant, and the reasons therefor. These reasons must be based on good evidence for such a cancellation. I think the President's Science Advisory Committee report on the use of pesticides emphasizes this point, that there needs to be some relief for industry from any arbitrary or capricious act on the part of a regulatory agency, and they have a right to file a complaint or object to any cancellation.

Short, sweet, and placid; like the calm before a hurricane, was the way someone described Hays's direct testimony.

Cross-examination was a different matter. Yannacone, with his courtroom instinct for the jugular, had been waiting—so he later said—to get Hays on the stand for two years. For, according to Yannacone, the further his efforts against DDT evolved, the more apparent it became to him that the real source of the problem lay not with the pesticide itself but with its regulation. Yannacone felt that to have a rational pesticide program which wouldn't either threaten the entire biosphere or destroy American agriculture, would require a rational way of regulating pesticide use. And here was Hays, representing the entire slapdash method of regulating "economic poisons," as pesticides are euphemistically called, sitting in front of him.

Mr. Yannacone: Dr. Hays, how long have you been in charge of the division?

A: Since July 1, 1966.

Q: What was your job prior to that time?

A: I was with the National Academy of Sciences as a director of the advisory center of toxicology.

Q: And your Ph.D. was in what, sir?

A: Biology. . . .

Q: Where did you work prior to the National Academy of Sciences?

A: I was formerly at the Wayne State University College of Medicine.

Q: Doctor, the Federal Insecticide, Fungicide, and Rodenticide Act refers in certain areas to provisions of the Food and Drug Act, does it not? . . .

A: The Act itself does not.

Q: But in the Act there is a provision that, under certain circumstances, certain material is referred to the Food and Drug Administration for evaluation?

A: Not in this Act.

Q: Will you tell us how the Food and Drug Administration and the U.S. Department of Agriculture act together in the registration of those pesticides that leave residues on food crops?

A: That is under the Federal Food, Drug, and Cosmetics Act.

Q: And that Act then refers to what?

A: To the requirement of the establishment of a tolerance under the Miller Bill of the Food Additives Amendment.

Q: Now which agency initiates this tolerance procedure for pesticides that leave residues on food crops?

A: The applicant initiates the request for a tolerance if it is to be used on food or feed.

Q: Does the applicant make the initial determination that there will be a residue?

A: Yes.

Q: Is this checked by your department?

A: No, sir. Chemically, you mean?

Q: Yes.

A: No.

Q: In other words, then if the applicant says there is no residue or will be no residue, your department does not check that statement?

A: We look at the data, sir, we review the data submitted with the application to see whether or not there would, in fact, be any residue if the applicant has said there was no residue. . . .

Q: Who supplies the data?

A: The applicant.

Q: From his own research?

A: Yes.

Q: In other words, a chemical company furnishes you data from its own research?

A: That's right.

Q: And if it doesn't measure any residues, you don't check [the] statement that there were no residues found?

A: We do not.

Q: Does anybody?

A: I would imagine that Food and Drug may test the method.

Q: Didn't you just say, Dr. Hays, that Food and Drug doesn't evaluate pesticides unless the petition is brought to them?

A: We are talking about data and residue data.
Q: You have gotten me a little confused, Doctor. I think you testified that the petitioner, the applicant for the registration, submits to your department---
A: Yes.
Q: Certain data?
A: That's correct.
Q: Let's assume that data has an indication that there are no detectable residues on food stuffs---
A: Yes. . . .
Q: The applicant, the registrant, submits the data, right, to your department?
A: That's correct.
Q: And if that applicant says there's no residue detectable on the food-stuffs to which the pesticide [is] going to be applied, your department does not scientifically, analytically check that statement, does it?
A: We check it; not by the laboratory method---
Q: You read his data?
A: That's correct, we read the data.
Q: All right. And you evaluate it; and if it is logically consistent within itself, you accept it, right?
A: That's right.
Q: The only thing you can determine is internal inconsistencies in the data?
A: That's right.
Q: Now at that point if the applicant does not tell you that there is going to be a residue and if his data, internally consistent within itself, shows no residues, there is no referral to FDA under the Food, Drug, and Cosmetics Act, is there?
A: That's right.
Q: Now, Dr. Hays, have you ever seen the registration application of DDT?
A: The original?
Q: Yes.
A: No.
Q: Have there been any subsequent applications for either the registration or reregistration or further consideration of DDT?
A: Yes.
Q: When was the most recent?
A: I have no idea. . . .
Q: Well, Doctor, do you know anything about the registration of DDT?
A: I know there have been a number of registrations for DDT. . . .
Q: What did you say your job title was with the department?
A: I am the Administrator and Director of the division.
Q: Of?

A: Of the Pesticides Regulation Division.
Q: And unfortunately, as bureaucratic operations are conducted, the buck stops in pesticide registration with you?
A: That's right.
Q: You have never seen a DDT formulation registration statement?
A: Oh, yes, I have seen registrations; but I have not actively participated in each registration.
Q: That isn't what I asked you, Doctor. I asked: Did you ever see any?
A: Oh, yes, I have seen---
Q: Okay. When was the most recent you saw?
A: I wouldn't have any idea, sir.
Q: You have been with the department since 1966, right?
A: Yes.
Q: Prior to that time did you examine any?
A: No.
Q: So between 1966 and now in 1969---
You are still with the department, right?
A: Yes.
Q: Still with the same title?
A: Yes.
Q: You have seen some DDT registration statements, have you not?
A: Yes.
Q: Now in those DDT registration statements was data furnished as to any sublethal effects of DDT?
A: If they were, they were submitted to the Safety Evaluation Staff.
Q: You don't know?
A: I wouldn't know.
Q: Doctor, who asked you to come here and testify?
A: The Department of Agriculture wishes to discuss the procedures used in the registration of pesticides.
Mr. Robertson: Mr. Examiner, the Department of Agriculture filed a petition for leave to intervene in this proceeding as a result of learning of the proceeding and analysis of the record disclosing that the federal registration procedures were discussed.

I don't think that Dr. Hays personally is in a position to say who may have requested him. This determination was made within the department.
Mr. Yannacone: All right, that's good enough. Dr. Hays, you did know why you were coming here?
A: Oh, yes.
Q: You did know the purpose of this hearing?
A: Yes.
Q: You are a representative of the U.S. Department of Agriculture?
A: Yes.
Q: Now, Doctor, what was your official job title again?
A: I am the Director of the Pesticides Regulation Division.

Q: And you are in charge of the regulation of pesticides, right?
A: Yes.
Q: And you are responsible for the regulation of pesticides?
A: I am responsible to see that the activities of the registration are carried out by those assigned to the duty of reviewing each application.
Q: Okay. And the scope of your duties or the extent of your duties is defined in the Federal Insecticide, Fungicide, and Rodenticide Act officially?
A: Right, yes. . . .
Q: Do your duties comprehend a study of the safety of DDT and its metabolites as they may be formulated as economic poisons?
A: Not directly.
Q: Is there any other department in the federal government that you know of that is responsible for the approval of the registration of an economic poison for use in interstate applications, other than the Department of Agriculture?
A: There's no other department responsible except the Department of Agriculture.
Q: Your department, the United States Department of Agriculture, is wholly and completely responsible, then, for determining whether or not an economic poison may be used in interstate commerce, right?
A: That's right.
Q: And is there any other division within the Department of Agriculture other than the one that you are the head of that is responsible for the approval of a particular registration for use?
A: There is no other division.
Q: In other words, then you are the top of that division of the U.S. Department of Agriculture which is responsible for determining whether or not a particular economic poison, in this case say DDT, is registered for use in interstate applications, right?
A: That's right.
Q: All right. Now, Doctor, tell us from your duties and the duties of your division as set forth in the Act as you read it and it's interpreted to you by your department's legal talent, tell us, Doctor, what specific information about a pesticide being proposed for registration your department is interested in.
A: I leave that entirely, sir, to the people responsible for the various scientific disciplines within the division.
Q: All right. Doctor, there is a policy and there are rules and regulations set forth as to what information a registration application must contain, is that right?
A: In general, yes, sir.
Q: What are these general requirements, please?
A: I think I have stated those.

Q: We want to review them for the record.
A: Chemical composition---
Q: All right, could we stop for a moment?
A: Yes.
Q: This is simply the chemical formulation of the compound as it's going to be used, right?
A: Right.
Q: And I think you testified that this is checked by your staff for accuracy?
A: That's correct.
Q: It's also checked for nomenclature in that it conforms with whatever the current scientific nomenclature for the substance is?
A: Yes.
Q: And if it's a substance like technical DDT, which is a mixture of *isomers*, your department checks to make sure that the isomer mixture concentration is set forth on the label accurately, right?
A: Not necessarily.
Q: All right. Isn't that part of the chemical composition?
A: If it's a technical grade, it need not state on the label what the percentages are.
Q: But does it have to say what the isomers are?
A: No.

I just gently stood there and sought the truth!
Victor Yannacone

Q: In other words, then a technical grade such as tech DDT need only state on the label that its major constituent is thus and so?
A: That's correct.
Q: And that's all your department then checks for, right?
A: Yes. Checks.
Q: Okay. Now what's the next element that's checked for?
A: The next would be the matter of effectiveness.
Q: Now, effectiveness. Will you tell us what to your agency "effectiveness" means?
A: I again, sir, rely entirely upon the scientists within the division of that discipline to determine what they consider to be effective. . . .
Q: With respect to DDT, . . . the check would be by entomologists?
A: That's correct.
Q: And they would be checking on effectiveness, right?
A: Yes.
Q: The effectiveness they check for is what?
A: Whether it controls the pest.
Q: The target insect?
A: That's correct.
Q: Now when we say "pest" in your department, we are referring to "pest" as defined by the Act, are we not?
A: That's correct.
Q: All right. Are we referring to any kind of insect that isn't defined by the Act?
A: Not that I would know of.
Q: In other words, then, a pest is like an officer and a gentleman; it's determined by an Act of Congress and set forth in the Act; and if it's named as a pest in the Act, it's subject to the jurisdiction of your department? . . .
Examiner Van Susteren: Just a moment.
Mr. Robertson: The term "pest" is not used in the Federal Insecticide, Fungicide, and Rodenticide Act. The term "insect" is used as well as "fungus," and so forth; so just for clarification I thought I would---
Mr. Yannacone: All right, we will take counsel's advice. Dr. Hays, where is the word "pest" defined then if it's not in the Federal Insecticide, Fungicide, and Rodenticide Act?
A: I don't know of any other place anywhere it's defined.
Q: It's defined in Title 7 of the U.S. Code, isn't it, in the Agriculture section?
A: As we just stated, it did not mention just "pest" but specified "insects."
Q: It sets forth in that section that these insects are subject to control, doesn't it?
A: Yes, I guess you would say that.

Q: For the purpose of policy determinations at your level in the department, effectiveness is considered as what? In other words, what do you understand by "effectiveness"?

A: As I said, I'm relying solely on the scientists to determine what, in their opinion, would be an effective control.

Q: This effectiveness then, is determined by an entomologist on a staff, right?

A: That's correct.

Q: Aren't there any published guidelines as to what is effective or not effective control?

A: No published guidelines.

Q: Aren't there any internal memoranda or understandings at various levels of your department that might tell us what "effective" is?

A: I'm sure that this could be found in many scientific journals.

Q: Oh, Doctor, you are the head of the only section of the USDA that is responsible for the registration, which means the actual interstate sale ultimately, of economic poisons like DDT. And you have told us that one of the criteria for registering these economic poisons is their effectiveness. You're telling me that effectiveness is left to the independent judgment of some technician or some entomologist on a scientific staff well down the line, so far down the line in your department that you don't know what his criteria for effectiveness are?

A: We have chief staff officers in the Product Evaluation Staff who are not well down the line, but who are competent entomologists, agronomists, plant pathologists.

Q: All right Doctor---

A: They are not technicians.

Q: It's a matter of opinion. . . . Now the safety data that's submitted with the registration statement, who furnishes this in the first case?

A: The applicant.

Q: All right. And are there set forms or set criteria or set elements of this safety type data? In other words, what do they check for and furnish you in the way of information?

A: Well, Mr. Yannacone, the first information that is provided by the applicant is data on the acute oral, dermal, and inhalation toxicology.

Q: All right, stop for a moment so we can expand on that. Does this include $LD_{50's}$?*

A: That is correct. . . .

Q: What kind of data comes in in addition to $LD_{50's}$?

A: It includes cumulative studies, repeated studies, repeated daily doses; it includes, as I said, eye and skin irritation studies---

*LD_{50} means the lethal dose of a pesticide necessary to kill 50% of a group of test animals, usually laboratory rats. (Eds.)

Q: These are on animals?
A: That's correct.
Q: What else is included in this initial safety evaluation?
A: In addition, there are studies on reproduction.
Q: All right. Now when you say studies on reproduction, what are the usual kind of reproduction studies that are considered in that?
A: In laboratory animals.
Q: And what do they measure, fecundity or fertility?
A: That's correct.
Q: They measure basically the number of offspring reproduced and whether there's any statistical difference between the control and the sample?
A: That's correct.
Q: Anything else?
A: Sensitization.
Q: And this again is with an experimental animal population?
A: That's correct. And at times human patch tests are involved.
Q: All right. And this is by normal allergic reaction study procedure?
A: That's correct.
Q: Anything else included?
A: In some instances antidote studies.
Q: All right. This is assuming that there is a poison problem, they determine the basic antidotes, and they furnish you with that information?
A: That is correct.
Q: All right. And that would then be included on the label?
A: That's correct.
Q: And by the way, Doctor, so you understand where we are going, I'm following the same outline you did on your direct testimony, which was nice and complete.

Now, [the evaluation of data] is done by which staff? . . .

A: This is done by the Safety Evaluation Staff, by review of the interagency staff of the Public Health Service.
Q: All right. Now the New Chemicals Evaluation Staff does what?
A: They are primarily concerned with the ingredient statement on the label, the net content, the product name, any matter dealing with flammability, the nomenclature of the compound, whether or not it is consistent with the chemical abstract nomenclature.
Q: Now, the Product Evaluation Staff does what?
A: Well now, let me try to make something clear here, Mr. Yannacone, in that we have two general groups of compounds that we would categorize as non-food-use compounds and those which may be used on food or feed. So that if we have an insecticide that does not in any way have any connection with food or feed, then our Product Evaluation Staff in the insecticide section will review the data in terms of whether the product is effective against that particular insect which is named on the label.

Q: I see. Now in other words, any substance such as DDT might have multiple registrations; and if it was going to be used for the control of certain insect vectors such as mosquitoes, and not on human foodstuffs it would then be evaluated as a non-foodstuff pesticide?

A: That is correct.

Q: And if it were going to be used for a particular food crop, it would then be evaluated by a different group within the section or under different criteria?

A: It would be reviewed by the same entomologists, but in addition would be reviewed by the Food and Drug Administration.

Q: I see. All right, now the review by the entomology group for an insecticide that is only to be used on non-foodstuffs includes only a study of its effectiveness against the target organism, is that correct?

A: That's part of it.

Q: All right, what else does it do?

A: Then we get into the question of where it might be used. [We get] into areas involving fish and wildlife.

Q: All right. Now would you elaborate for us on how this work with fish and wildlife is done?

A: Well, there are certain data that are required by our division in support of the registration, in . . . any use that might possibly affect our fish and wildlife, and studies would be required, or data would be required to see what doses would, in fact, affect any fish or wildlife.

Q: All right. Would you back up a moment? Who makes the determination on whether or not there will be an effect on fish and wildlife?

A: The applicant usually is quite cognizant of the need for any other studies as it might pertain to fish and wildlife.

Q: Now what kind of studies are presented to you generally on data with respect to fish and wildlife safety?

A: Well in general, as I recall the scientists' review, they require LC_{50}* concentrations in a variety of fish species; they require LD_{50} studies for certain types of birds.

Q: All right. Anything else?

A: I can't recall, at the moment, anything else.

Q: Do you recall whether they do reproduction studies with fish?

A: We have not, in the past, required these extensive studies on reproduction. But this again would be in concert with the Department of Interior in terms of advice from them as to what would be needed.

Q: All right. Now when you speak in terms of advice from the Interior

*LC_{50} is the lethal concentration in water. (Eds.)

department, is this advice in any way binding on the Department of Agriculture?

A: Well, I don't know that any advice is always binding. We certainly do take into consideration any information and advice that the Interior or any other agency would give us.

Q: Are you familiar with the testimony of Dr. Lucille Stickel, head of the Pesticide Research Group at Patuxent for the U.S. Department of the Interior, which was made a part of this record; and [of] Dr. Kenneth Macek who is with the Fisheries Section at Columbia, Missouri, on the effects of DDT on certain birds and fish, respectively?

A: I am in general familiar with it, yes.

Q: And is there any doubt on the part of your department experts as to the validity of this data, that you know of?

A: I wouldn't know what their feelings are in the matter at all.

Q: Well, have you, at the policy level, considered this data?

A: I have not thoroughly reviewed all of the data; [I am] just in general familiar.

Q: I want you to assume, Doctor, then, the substance of the data and the testimony of Dr. Stickel and Dr. Macek, Dr. Stickel having testified that she observed in laboratory populations eggshell thinning and reproduction failure in kestrels, a bird of prey, and ducks, a particular kind of duck; and Dr. Macek observed reproduction failure in the lake trout with sublethal concentrations of DDT at levels now already present in the respective environments that these species inhabit naturally.

Now assuming that, Doctor, is there anything you in your capacity can or would do about the registration of DDT?

A: Well, we would have to have, certainly, some very extensive and definitive data as it pertains to the normal usage of any pesticide, and not based solely on any laboratory finding.

Q: Well, Doctor, do you require this type of data from the applicant when he makes up his registration statement?

A: We have not required this kind of data in the past; although we have recently reviewed our criteria on our data for fish and wildlife and have indeed added other kinds of data such as field studies that we think will be very useful. But it is too early now to evaluate this kind of approach.

Q: . . . When did you make the changes?

A: Oh, in about the last year we have been requiring field studies particularly in areas where there's very large and heavy wildlife populations.

Q: Does this apply to a chemical that is already registered such as DDT?

A: Yes.

Q: And who performs these experiments?

A: We have requested the applicants to consider and to initiate studies in the matter of field testing.

Q: All right. And what kind of field tests are you comprehending within this kind of study?

A: Well, we have contemplated putting certain types of bird species such as pheasants and ducks in areas where we know that this could well be a problem and to see whether, from the normal use of the pesticide, there is, in fact, any serious hazard associated with such use.

Q: What about the fact that a great many of these experiments have already been done, both by private individuals working for academic institutions and by the U.S. Department of the Interior itself?

A: We consider the data from a variety of sources, not only what we get from the applicant, but what is available from whatever source.

Q: Let's back off a moment, Doctor.

You are now aware, you have testified, of the work of the U.S. Department of the Interior, Dr. Macek's fish work, and Dr. Stickel's work with the hawks and the ducks, right?

A: Yes.

Q: I take it from this that you don't question their scientific accuracy. And you have considered them laboratory studies. You should by now also be aware of a great many field studies that have been done over the past five or six years.

Now, Doctor, isn't this more evidence against the use of DDT than was ever submitted on the safety of DDT to your department originally on the registration of DDT?

A: Well, there's no doubt but what there has been new data presented in the last few years on a variety of pesticides about which we knew little a few years ago.

Q: All right. Doctor, whenever possible at this hearing we are trying to discuss DDT and its metabolites exclusively. I know this might restrict you a little bit, since you are responsible for a great many more pesticides than just DDT. However, DDT is the subject matter of this action.

Now isn't it a fact, Doctor, that there is already accumulated in the scientific literature and in the data submitted to your department from the U.S. Department of the Interior, more data indicating damage to wildlife populations on a broad scale from DDT than there is data on the safety to wildlife populations already in your records? Isn't that a fact, Doctor?

A: I wouldn't go so far as to say that is a fact.

Q: All right. Doctor, then you tell us for the record what data your department does have on the safety of DDT to wildlife populations that conflicts with the data that you already are aware of, [indicating] that DDT is not safe to wildlife populations.

A: Well, I think we can say in general that, from the wide usage of DDT, there has been a remarkably good record of the use of DDT without any evidence of any widespread adverse effects. . . .

Q: Doctor Hays, have you ever heard of Dr. Robert Risebrough?

A: Yes.

Q: Are you aware of any of his published material?

A: I am aware that he has published material.

Q: Have you evaluated any of that published material?

A: I have not.

Q: Are you aware of the general subject area of that published material?

A: In a very general sense.

Q: What is your understanding of the subject material?

A: It, in general, is a review of the widespread effects on wildlife.

Q: Of?

A: Of DDT.

Q: Have you ever heard of Dr. Charles F. Wurster, Jr.?

A: Only during his testimony.

Q: Then you are not aware of any of his publications?

A: No, sir.

Q: Do you read *Science?*

A: I read a lot of journals, not *Science* particularly. . . .

Q: What journals do you read, Doctor, in the regular course of your daily duties?

A: Well, I read the *Journal of Toxicology and Applied Pharmacology*, the *Journal of Pharmacology and Experimental Therapeutics*; articles that are brought to my attention by our staff, the journals of which I am not particularly aware of at the moment, however.

Q: Basically then you read the two big toxicology journals?

A: That's correct, yes. . . .

Q: Is the subject of the status of DDT and its metabolites as an economic poison under consideration at this time or under investigation at this time by your department?

A: The subject of DDT is under consideration by the Department of Agriculture through the National Academy of Sciences, National Research Council.

Q: Is this the only pesticide that's being considered in this way?

A: No, it involves all persistent pesticides.

Q: I see. But what is the interest of the Department of Agriculture, the division that you head that's responsible for registration, in DDT and its metabolites, if any?

A: I just remarked that we are interested in the total concept of persistent pesticides including DDT as it relates to our environment, and have asked the National Academy of Sciences to make such a study.

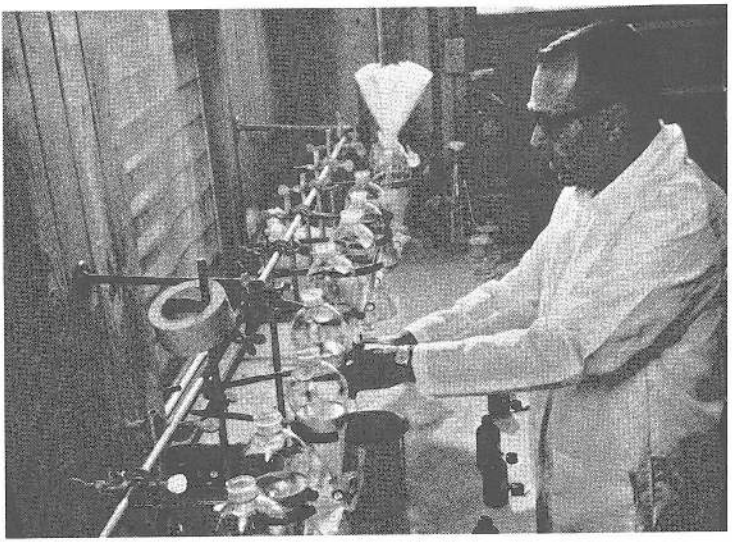
Q: But what about your department, Doctor; what work is your department doing, if any, on this matter?

Examiner Van Susteren: On what matter?
Mr. Yannacone: On the matter of DDT.
Examiner Van Susteren: Well, is it evaluation, or re-evaluation?
Mr. Yannacone: I don't know. I would like to know from Dr. Hays what, if anything, other than referring the matter to the National Academy of Sciences, has his department done with respect to DDT (which apparently was [a problem] of sufficient magnitude . . . to refer to the National Academy of Sciences)? . . .
Dr. Hays: We are not doing anything.
Mr. Yannacone: Okay. Now in other words, then, the registration of DDT as it now exists is not under direct review by your department now?
A: No, sir. . . .
Q: But now, Doctor, you testified on direct examination that among the criteria used by the Product Evaluation Staff are evidence of phytotoxicity and metabolism of the pesticide, migration of the pesticide, translocation of the pesticide, and persistence of the pesticide; is that correct?
A: That's correct.
Q: Okay. This data then is furnished to you by the applicant, is that correct?
A: That's correct.
Q: And it's not checked independently in a scientific analytical sense by your department, is it?
A: That's correct.
Q: In other words, Doctor, your department is dependent for data in these registration cases on the applicant's good faith, isn't it?
A: The Act requires the applicant to submit the data.
Q: Yes, but your department doesn't independently verify or check this data?
A: No.
Q: Okay. Now you probably don't have the money, do you?
A: That's right.
Q: But you do have a staff of analytical chemists and biologists and what not that do work and just check this data, don't you?
A: Check only from the point of view of enforcement.
Q: I see. And the enforcement provisions of the Federal Insecticide, Fungicide, and Rodenticide Act are solely limited to whether or not the product is mislabeled?
A: That's correct.
Q: And the label need only contain its proper chemical name and ingredients and contents and weight and a general safety warning?
A: And directions for use.
Q: Directions for use. All right.

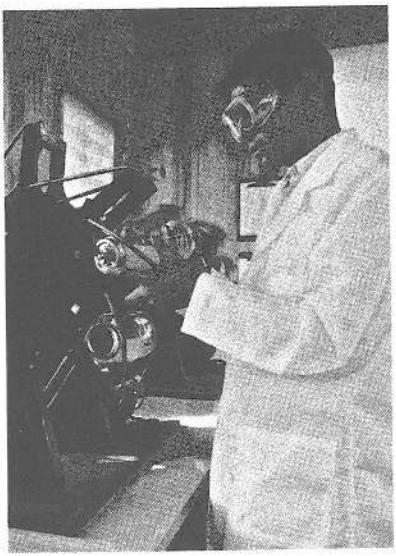
Now what data is generally required for a pesticide such as DDT on the matter of persistence? Soil persistence?

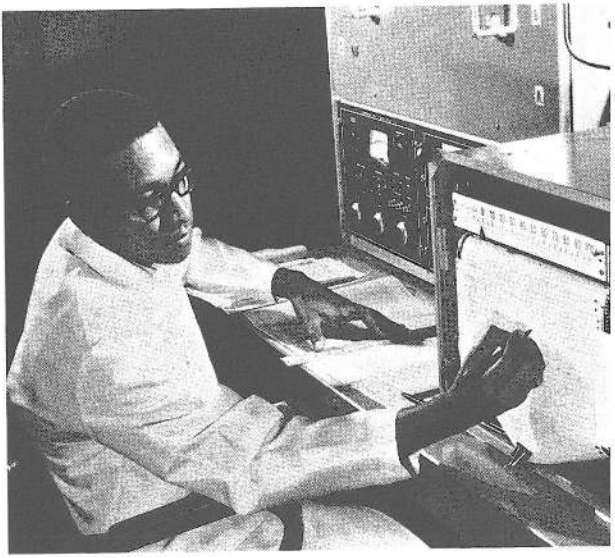
A: When DDT was introduced, I---that's been many years ago---

In effect, then, federal registration requires no testing of the impact of insecticides on the insect community to which they are applied, or their potential for triggering pest resurgence and secondary pest outbreaks.
Robert van den Bosch



To test for pesticide residues in soil, samples are collected, isolated in distilled water . . .





. . . mixed with chemicals which absorb any residues, and analyzed in a gas chromatograph.

Q: No, I'm talking about these current new registrations. You said since '66 there have been some registrations of specific uses of DDT. What kind of data---

A: Persistence in soil.

Q: That's all?

A: Essentially.

Q: I don't want to ask you a technical question unless you feel you want to answer it. But if you can tell us, tell us how this soil persistence data is gathered; in other words, what kind of tests do they make; do they just measure the amount of DDT applied, and then the amount in the soil later on?

A: I would have to leave that detail to the scientists.

Q: Okay. But the only persistence data you are interested in in the department as far as registration is concerned is soil persistence?

A: I said mostly in the soil, in general. I'm sure that water is also included.

Q: Well, persistence in water. Do you have any idea how they measure persistence in water?

A: I'm sure that one could take samples of water at varying times to see how quickly it is either hydrolyzed or is broken down in the presence of water. If it's highly soluble in water, it may persist for some time.

Q: Okay. Doctor, we are now talking about DDT. Do you know anything about the behavior of DDT in water?

A: It's very insoluble.

Q: Then how are you supposed to measure its persistence in water? Do you have any idea of its solubility?

A: No.

Q: Would you believe it if I told you that, according to Mr. McLean, who I think is probably accurate, its solubility is something on the order of one part per billion in water? And you know of course, I'm sure, from your toxicological studies that the relative minimal sensitivity, accurate sensitivity in the gas chromatograph is on the one part per billion range. So we are talking about a substance which is soluble in water only at the lower threshold of detectability.

Now you don't really measure honestly and accurately persistence in water, do you, for DDT?

A: Not for DDT.

Q: All right. Now you indicated that translocation is a consideration?

A: That's right.

Q: Now again speaking with reference to general criteria, what kind of data do you get on translocation of pesticides?

A: Well, we are, I'm sure, primarily concerned with the uptake of a pesticide from the soil to the plant and whether it's translocated from the roots into the plant.

Q: Any other types of translocation?

A: I don't know.

Q: All right. And this translocation data would be with reference to the plant on which the pesticide, in this case DDT, is applied?

A: That's right.

Q: All right. You are not interested in, generally, translocation from, in, through, and about plants that might be non-target plants?

A: No.

Q: In fact, most of this information and research is directed towards the target insect and the target plant, is that correct?

A: That's right. . . .

Q: Now, Doctor, there are no studies that you know of submitted with these registration statements on the effects of DDT on phytoplankton, are there?

A: I'm not in that field at all.

Q: I think you also indicated that studies are made of the migration of the pesticide, is that correct?

A: That's right. . . .

Q: . . . Your department in reviewing the registration of this pesticide is only interested in its migration through soil?

A: No, I'm sure they are interested in many other things. I wouldn't know particularly just what their scope of interest would be. . . .

Examiner Van Susteren: By "they," you mean the evaluators in your division or the evaluators of the applicant?

Dr. Hays: The evaluators of the applicant as well as the review scientists. . . .

Mr. Yannacone: In other words then, the evaluators in your division essentially cooperate rather extensively with the applicant in determining criteria for measurement, don't they?

Dr. Hays: Yes, I would say we work very closely together in developing good criteria.

Q: Good to or for whom, Doctor?

A: For the---for everyone concerned.

Q: All right, Doctor. In other words, then, the real mission of your department is the greatest good for the greatest number; isn't that so?

A: I think that's right, yes.

Q: And you sincerely believe that your department is now operating for the greatest good for the greatest number, don't you?

Examiner Van Susteren: Well, Counsel, the Examiner will break in and say that you are using a very good Marxian doctrine when you start using the phrase, the greatest good for the greatest number. And where are we going here?

Mr. Yannacone: I don't particularly like to be referred to as a Marxist. I think we can point out some differences of approach between the local Marxists and yours truly. But I will---including no beard---but I will---

Mr. Robertson: Along those lines, Mr. Examiner, I also would like to inject that as Dr. Hays has testified in his direct testimony, the

mission of this particular division within the Department of Agriculture is to see to it that the provisions of this Act are complied with in all cases.

Mr. Yannacone: Okay. That's what I wanted to get on the record.

Now, Dr. Hays, your mission in your division in your department is to see to it that the Federal Insecticide, Fungicide, and Rodenticide Act is met in all its requirements? Isn't that right?

A: That's correct.

Q: Of your own knowledge of the Federal Insecticide, Fungicide, and Rodenticide Act, can you point to any portion therein where considerations are given to, for, or about fish and wildlife? . . .

Examiner Van Susteren: Dr. Hays has already stated on direct that there is an interdepartmental agreement between Agriculture, Interior, and Health, Education and Welfare.

Mr. Yannacone: I'm aware of the agreement, Mr. Examiner, but I want the statutory provision in from this witness that governs his department.

Examiner Van Susteren: If he knows it, he can tell us. If he doesn't---

Mr. Robertson: Well, can I---

One of the provisions in the statutes is that a product will be misbranded "if the labeling accompanying it does not contain directions for use which are necessary and, if complied with, adequate for the protection of the public";---

At this point I would inject that this term "public" has always been considered to mean man, all of his beneficial animals, his wildlife, his livestock, and so forth.

Mr. Yannacone: All right.

Mr. Robertson: Now the second provision deals with the warning or caution statement. A product would be misbranded "if the label does not contain a warning or caution statement which may be necessary and, if complied with, adequate to prevent injury to living man and other vertebrate animals, vegetation, and useful invertebrate animals. . . ."

Mr. Yannacone: And now, Doctor, you are aware of those two provisions?

A: Yes.

Q: Can you tell us now whether or not any new data has been required by your division for DDT since 1966?

A: Not to my knowledge.

Q: Doctor, you are aware that there is now some evidence that there is injury to vertebrate animals and useful invertebrates attributable to DDT and its metabolites?

A: Yes.

Q: You are aware, are you not, Doctor, that there is at present some evidence that a great many of the world's (in general) and the United States' (in particular) ecosystems are contaminated with DDT and its metabolites; are you not?

A: Yes.

Q: You are aware that DDT is still recommended for use by the Department of Agriculture; are you not? . . .

A: Yes.

Q: But the pesticide is still registered and still may be sold with the label that was on it prior to 1966, is that right?

A: That's correct.

Q: Now, Doctor, is there a procedure available to you or your division upon receipt of evidence that a particular registered compound may be causing some damage, significant damage to vertebrate animals and useful invertebrates; is there any procedure for your department, your division of the Department of Agriculture to take some action?

A: The division could well receive such data if it were available and presented to the division---

Q: Stop just a moment. . . .

Examiner Van Susteren: The division could receive such data and what?

Dr. Hays: For review.

Mr. Yannacone: All right. You have received such data, have you not?

Dr. Hays: Formally? No.

Q: You have not received such data formally?

A: For review. . . .

Q: Doctor, tell us what your department considers a formal request for review?

A: We, as I said, have reviewed data wherever it may be found for our daily responsibilities of the registration of pesticides.

Now in regard to DDT, we have received no specific request to review any data gathered by anyone for our evaluation.

Mr. Yannacone: Would you please, Madam Reporter, read back my original question. And, Doctor, would you answer that question? . . . What is a formal request for review? How do you make a formal request for review?

A: Well, I don't know there is any formal procedure, Mr. Yannacone. But it would seem to me that if anyone wished to submit any data relevant to the effects of DDT, it can be done by simply sending it to the division for review and evaluation.

Q: All right, Doctor. I don't mean to be nasty. But you just told us your department has not received a formal request for review. Yet you said just before, that you have knowledge of Dr. Stickel's data, Dr. Macek's data, both of which [come] from competent federal government agencies, plus the fact that you know about Dr. Welch's and Dr. Risebrough's data. What is necessary to make a formal request for review? Isn't that enough? Isn't that enough to raise a question in your mind, Doctor? . . .

Examiner Van Susteren: The Examiner has spent all of his, almost all of his adult life in the state bureaucracy. And some of the material and information that is submitted to the various departments of

this state in his opinion is nonsense. It would seem that perhaps what Dr. Hays is talking about, that if it comes from what appears to be a responsible source on a subject of some importance with some data that appears to have some significance or validity on its face---I presume that that is the type of situation that Dr. Hays is referring to. . . . Am I correct, Doctor?

Dr. Hays: That's correct.

Mr. Yannacone: Mr. Examiner, you have apparently survived your years with the state bureaucracy with some measure of talent, competency, and public spirit left. What I'm trying to establish now very simply---and I ask the question again: What constitutes a formal request or a request for review that you would consider formally made to your department?

Mr. Robertson: Mr. Examiner, I would like to know what Mr. Yannacone means by a formal request for review.

Mr. Yannacone: This witness stated that he received no formal request for review of any of this so-called new data since 1966 with respect to DDT. I asked him, since he's already testified he has knowledge of this data, personal knowledge, much less certainly the lower levels of his department have knowledge, but he's got personal knowledge; I would like to know for the record and for our own personal information so we can see to it that a formal request is made, what constitutes a formal request.

Examiner Van Susteren: All right, now---

Mr. Yannacone: And he just testified there is no such thing, there is no such procedure.

You can't have your cake and eat it too, Counselor. . . .

Examiner Van Susteren: Is there any provision in the Act which permits the department to act on its own motion in this respect for revocation, cancellation, and so on?

Mr. Robertson: The way the statute is phrased, it is only the Secretary, in accordance with the procedures specified in the Act, that can initiate the cancellation of registration. The Secretary granted the registration, and pursuant to the procedures can initiate procedures to cancel that registration.

Examiner Van Susteren: And the initiation, then, would have to be made by a formal request to the Secretary. Is that your interpretation of the Act?

Mr. Robertson: Right. The Secretary, or Dr. Hays through his division.

Examiner Van Susteren: But it would have to be addressed to the Secretary, as such, for a formal initiation of a re-evaluation or cancellation?

Mr. Robertson: Such a formal request, perhaps, as Mr. Yannacone has been referring to, I think, would properly be addressed to the Secretary.

Mr. Yannacone: And this is basically the procedure under the Federal Insecticide, Fungicide, and Rodenticide Act for cancellation?

Mr. Robertson: That's the statutory authority, yes.

Mr. Yannacone: Okay. To your knowledge, Dr. Hays—or if Mr. Robertson can fill it in—is there any other procedure for the deregistration or cancellation or suspension of a registration that you know of?

A: I don't know of any other procedure. . . .

Q: Doctor, in your operation as chief of your division within the Department of Agriculture, do you observe specifically in your activities any regulations which might be set forth in [the] memorandum which you introduced as exhibit No. 115 [Department of Agriculture, Agricultural Research Service, *Safe Use of Pesticides*, a memorandum between the Secretaries of HEW, the Interior, and Agriculture]? . . . What I'm interested in finding out is: Does your division within the Department of Agriculture have anything to do with anything that might be set forth in that memorandum of understanding? If so, tell us what it is?

A: Well, this is a memorandum of understanding in terms of review of the applicant's product in terms of the label and data for review and consultation with the other agencies.

Q: I see. Okay. It's a review and consultation understanding?

A: Yes.

Q: Now you are familiar with it?

A: Yes. . . .

Q: In the regular course of business of your division within the Department of Agriculture, what specific activities do you undertake to: ". . . keep each of the other departments [being Interior, and Health, Education, and Welfare] fully informed of developments in knowledge on this subject [the subject of pesticides] from research or other sources which may come into its possession"?*

A: We exchange information that we have on any work that may be done that relates to registration of pesticides.

Q: I see. Have you exchanged information with Interior and Health, Education, and Welfare on DDT?

A: I wouldn't know whether information has been sent back and forth or not. This would have been done by the scientists within each of the sections. . . .

Q: Dr. Hays, in the regular course of your work for the United States Department of Agriculture as chief of the division that you are director of, do you have care, custody and/or control of the actual filed documents, the registration applications?

Mr. Stafford: Haven't we had a ruling on this line of questioning? . . .

Mr. Yannacone: I'm asking him whether or not he's got them. They cannot be found. They have been denied to us; they have been denied to Senator Nelson. Now somebody is here from the USDA; let's find out who's got the papers.

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*Bracketed statements are Mr. Yannacone's.

Mr. Stafford: I ask that the record---that your Honor direct that that statement of Counsel, this gratuitous statement be stricken from the record and expunged from this proceeding.

Examiner Van Susteren: It may stand. But the Examiner has already ruled, Mr. Yannacone, that that request will need to go to Mr. Robertson; he represents the department here today; and as to---

Mr. Yannacone: What is Dr. Hays?

Examiner Van Susteren: No, Dr. Hays does not represent the United States Department of Agriculture here today; it is represented by an attorney.

Mr. Yannacone, are you going to tell me that your various witnesses, or former witnesses here represent the Environmental Defense Fund? . . .

You may submit your request to Mr. Robertson.

Mr. Yannacone: All right. . . .

Now, Doctor, since 1966 have you ever had occasion to examine any of the data or information prepared by any of the departments under your control, such as the Product Evaluation Staff or the Safety Evaluation Staff or the New Chemicals Evaluation Staff, with respect to DDT registration applications?

A: I have not personally reviewed---

Q: Who in your department, if you know, has?

A: I stated before that the scientists within each of the sections are responsible for the review of the data in support of the registration.

Q: All right. Dr. Hays, are you the head of this division?

A: Yes.

Q: Who do you report to at the next higher level?

A: I report to the Deputy Administrator.

Q: Of?

A: Agriculture and Research Service.

Q: What is his name?

A: Dr. Frank Mulhern.

Q: Spell it, please, for the record.

A: M-u-l-h-e-r-n.

Q: And do you report to anyone else?

A: Not directly.

Q: Who reports to you in your division? Directly?

A: The assistant directors.

Q: How many are there; what are their names?

A: Two. The Assistant Director for Registration, Mr. Harold Alford; Assistant Director for Enforcement, Mr. Lowell Miller.

Q: Anyone else?

A: No.

Q: Have either of these two men ever reported to you on DDT or its metabolites?

A: They may have discussed some registration. I would not know what in particular.

Q: Is it in the regular course of your activities as Director of this division a practice to require written reports from either of these two assistants?

A: No.

Q: In other words, then, you conduct all your business with your two associates by conference and by verbal communication?

A: That's correct. . . .

Q: Do you put any directives in writing to either of those two assistants?

A: Yes.

Q: Okay. What kind of directives, Doctor?

A: They are directives that have to do with division activities.

Q: Such as?

A: Procedures.

Q: Such as procedures for registration, or consideration of registrations?

A: Procedures largely in the conduct of our daily affairs.

Q: Which include registrations?

A: It may.

Q: What do you mean, "it may," Doctor? Does it or does it not?

Examiner Van Susteren: Just a moment, Counsel. First of all, perhaps we are all assuming something here that we are wrongly assuming---

Mr. Yannacone: That the witness knows anything?

Mr. Robertson: Mr. Examiner---

Mr. Stafford: I object.

Mr. Yannacone: I will withdraw the comment.

Examiner Van Susteren: It's not only going to be withdrawn, but I think you owe the witness an apology.

Mr. Yannacone: I will owe the witness an apology when I see that he does know something.

Examiner Van Susteren: I feel that a remark like that addressed to Dr. Hays in this type situation is reprehensible.

Mr. Yannacone: All right. I will apologize for the dignity of the Court and the dignity of the profession.

I'm sorry, Dr. Hays.

Examiner Van Susteren: Perhaps we are erroneously assuming that you are aware of some of the intricacies of bureaucracy. But sometimes there are two different lines of authority in an agency. There may be administrative authority and there might be what you might call professional or line authority.

Mr. Yannacone: Okay, let's find out.

Examiner Van Susteren: And perhaps---

I don't know how the Department of Agriculture is set up, but I do know how certain other agencies are set up.

Mr. Yannacone: All right. It can't be set up as badly as some.

[Doctor,] is there a division of functions within your department between professional activities, which involve scientific evaluation

of the pesticide, and nonprofessional administrative and clerical activities?

A: Yes.

Q: Now are you responsible for both of those divisions of function?

A: As head of the division, yes.

Q: Now who is directly on a day to day basis responsible for the professional activities or the scientific activities?

A: As I have stated . . . the chief staff officers of each of the sections. . . .

Q: Now who do these chiefs report to? Directly?

A: For registration?

Q: Yes?

A: To the Assistant Director for Registration.

Q: And that man reports directly to you?

A: Yes. . . .

Q: Okay. Since 1966, Doctor—and from now on you can preface everything with that—since 1966 have any reports been made in writing from these section chiefs to your assistant in charge of registration with respect to DDT registrations?

A: I wouldn't know precisely if there had been specific reports that would necessarily have come to my attention.

Q: Do you ever confer directly with these section chiefs?

A: We have a staff meeting.

Q: How often.

A: Usually once a month.

Q: Since 1966 have you at these meetings ever discussed the registration of DDT?

A: That I couldn't remember. . . .

Q: Doctor, since you took over as chief, have you communicated directly, or indirectly through your assistant in charge of registration to these professional section chiefs with respect to the registration of pesticides?

A: Yes.

Q: Have these communications been in writing or verbally?

A: Some have been in writing.

Q: Have any of these communications involved registration procedures applicable to the registration of DDT?

A: I couldn't answer that. . . .

Q: Doctor, did you prepare an outline of your direct testimony before you testified here today?

A: I---

Mr. Stafford: Object to that, your Honor.

Mr. Yannacone: I want to find out what he does know, if anything.

Mr. Stafford: Also on the basis of relevance.

Mr. Yannacone: He testified now "I don't know," "I don't know" about the day to day operations of his department. . . .

Now all I'm trying to find out is whether or not there's any flow of information or communication or regulation or rule or internal

policy that might be applicable to the registration or have any bearing on the registration of DDT that flows, not from the bottom up where Dr. Hays might not understand or know or might have been stopped at his assistants' level; but from Dr. Hays down. That's the question I have asked. Has he made any recommendations orally or in writing that might be applicable to the registrations of DDT as they come in from his office either directly to these section chiefs or through his administrative assistants to these section chiefs. That's all I'd like to know.

Examiner Van Susteren: Can you answer the question?

Dr. Hays: No, I don't really; no, I can't remember the details of every little memorandum; I do not know of any. . . .

Mr. Yannacone: Now to your knowledge, since 1966, have there been any changes in the criteria for registration of pesticides, in particular DDT? . . .

Dr. Hays: Your Honor, I think there has been only one change that was recommended by the Chief Staff Officer for the limitation of the use of DDT for cockroaches. . . .

Q: And when he made that recommendation, how did that become enforceable? . . .

A: This would not have required an enforcement action, but rather a registration action.

Q: Would you tell us, please, so we get the record a little bit clearer, what do you mean by registration action?

A: There are times when there needs to be a modification in the directions for use. And where in this instance there was some evidence to indicate the resistance on the part of the cockroaches to the actions of DDT, it seemed that there was no longer any need for this particular use; and therefore the entomology chief staff officer instructed his staff that in the future these uses would be phased out in the case of cockroaches.

Then the cross-examination of Hays went into the kinds of toxicity data required to register pesticides.

Mr. Yannacone: Is there a written standard for evaluation [of data necessary for registration] which governs the activities of each of [the] department section heads?

Dr. Hays: Only in so far as the, let's say the type of statement that would go on the label, as I said, in terms of a signal word. Now this is spelled out.

Q: Now the words we are talking about, if I remember correctly, are "Danger," "Warning," and "Caution"?

A: Yes.

Q: [The] three groups of senior staff professionals are responsible for the determination of which of those three words go on?

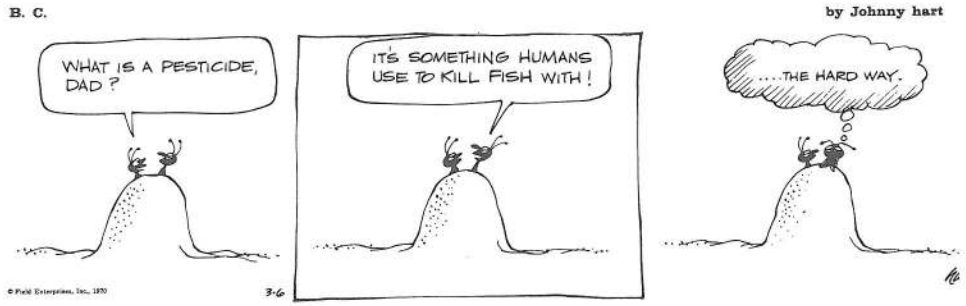
A: The Safety Evaluation Staff would be responsible for which word would be applicable in each instance.

Q: I see. Now the safety evaluation chief, who is Mr. Shaughnessy---
A: Mr. McClain.
Q: Mr. McClain. He accumulates and evaluates all the data that's presented on safety and then decides whether the label is going to have "Danger," "Warning," or "Caution"?
A: That's correct.
Q: Is there any review of his evaluation?
A: No, other than his own, or the people working with him.
Q: But there's no higher authority than he on this subject?
A: No.
Q: Now and you take his recommendation without any further work?
A: Yes.
Q: Now what are the basic meanings of those three words?
A: Well, in the case of a product requiring the signal word "Danger," it is based on the acute LD_{50}.
Q: Would you explain that a little bit more in detail?
A: This is the dose that is found or has been found to produce a 50 per cent mortality in the population study.
Q: All right.
A: Now---
Q: Excuse me just a moment. I don't want to interrupt your trend of thought, but on "Danger" the determination is made on acute $LD_{50's}$. In what kind of experimental situation or what level of $LD_{50's}$?
A: Well, any product that has an LD_{50} lying between 0 and 50 milligrams per kilogram would require that signal word "Danger," poison, skull and cross bones.
Q: Okay. LD_{50} in what?
A: In rats.
Q: Is the experimental procedure to be followed by whoever is submitting this data---And by the way, this data is submitted by the chemical company or manufacturer, right?
A: That's correct.
Q: And it's not checked independently by your department?
A: No, sir.
Q: Now is there any specified procedure for making these tests?
A: No specified procedure. It is a well-recognized procedure that is used by most laboratories.
Q: All right. In other words then, there is nothing in your department at this particular level that's equivalent to a mil spec for testing a particular product?
A: No.
Q: Now the next label down, I assume, the next level after "Danger" is "Warning," right?
A: "Warning."
Q: Okay. Now what's that based on?
A: Any product that has an LD_{50} lying between 50 and 500 milligrams per kilogram would require the signal word "Warning."

Q: And "Caution," which is the next lower one?
A: 500 to 5,000.
Q: All right. And if it takes more than 5,000, you don't put anything on it?
A: It may not necessarily require a caution statement.
Q: All right. Now in other words then, Doctor, the function of the Safety Evaluation Staff is to evaluate the data submitted by the manufacturer with respect to $LD_{50's}$ in rats; and . . . the LD_{50} [level], if it's in one of these three ranges, determines which of the three warning labels goes on it?
A: That's correct.
Q: The product---
Mr. Robertson: Mr. Examiner, this line of questioning, this testimony by Mr. Yannacone with respect to what Dr. Hays has said, the impression to me is being given here that this is the only thing the evaluation staff does. And I don't want that impression. . . .
Mr. Yannacone: No, I don't mean to give that impression.

Now, Doctor, would you tell us what else the safety evaluation group, led by this Mr. McClain does? . . . I want [it] understood, Doctor, throughout, that wherever possible we don't want the broad spectrum, we just want to know what is applicable to a material like DDT.

A: A material like DDT would require, as I said before, the dermal toxicity, the inhalation toxicity---
Q: And again---
A: ---and any other such requirement as the scientists would think would be important in terms of precautionary statements.
Q: But as for fixed procedures in your department, the mandatory procedures, it involves a determination of $LD_{50's}$ in rats?
A: Only for the signal word.
Q: Now are there any other studies done to your knowledge or required by this section other than dermal and inhalation and sensitivity studies?
A: Not other than I have already indicated that the review staff would think would be essential for a proper evaluation for preparing a precautionary statement.
Q: All right. Now these precaution statements that you are referring to, none of us is familiar with the labeling of these products. What's a precautionary statement? What do you mean by that?
A: I'm thinking of a formulation containing DDT that might be highly irritating if it were spilled into the eye.
Q: In other words, the statement would say: "Warning (Caution, Danger), harmful if spilled into the eye"?
A: Or "Avoid Contact with the Eyes."
Q: All right. And is this based on studies again with rats?
A: Rabbits.
Q: Rabbits. Okay. Now these dermal and inhalation studies, the determination is again acute $LD_{50's}$?



A: Acute and subacute.
Q: All right. What is considered subacute in this sense?
A: 21 day dermal application, 90 day feeding study.
Q: Producing $LD_{50's}$?
A: No, to determine any other effects that would not be discernible.
Q: Such as?
A: Such as cumulative effects.
Q: Such as?
A: Changes in the *hematopoietic* system.
Q: What kind of tests are generally required, Doctor?
A: There again I have said that I have relied solely on the toxicologist to determine what particular test he would require in any given formulation. . . .
Q: Doctor, are you aware from your research and your own personal work as to the types of studies used to determine various kinds of subacute toxicities?
A: I'm aware of them.
Q: Are you familiar with the type of testing required to determine whether or not there is sublethal or subacute damage to the hematopoietic system in an animal?
A: Yes.
Q: Do you know whether or not all the necessary tests for such damage are done with respect to the registration of the pesticide DDT since 1966?
A: I'm aware of a great many studies that have been done.
Q: With respect to the registration?
A: I'm not familiar with all of the data that has been submitted over the period of 20 years.
Q: No, Doctor, that is not the question I asked you; I asked you since 1966, in your department, are you aware of whether or not studies with respect to subacute or sublethal effects of DDT in animals were submitted?
A: No, there have been none since 1966, to my knowledge.
Q: There have been no studies to your knowledge submitted?
A: That's right.
Q: With respect to registration?
A: Not since '66.

Q: All right. Do you have any knowledge of whether or not there were any subacute studies prior to '66?

A: I would have no direct information as to what was submitted prior to '66.

Q: Doctor, again all these studies that are included in the safety evaluation section's consideration are furnished by the manufacturer or the applicant, is that correct?

A: Yes, sir.

Examiner Van Susteren: Except that I believe, Dr. Hays, you stated that the head of the safety section could ask for further and additional tests to be run either by the applicant or by an independent laboratory---

Dr. Hays: Yes.

Examiner Van Susteren: ---selected by the applicant?

Dr. Hays: That's correct.

Mr. Yannacone: Of your own knowledge do you know whether or not the head of the safety evaluation section was called for such additional studies?

Dr. Hays: Since 1966?

Q: Since 1966?

A: I don't know that he has, sir.

Q: Have you?

A: Well, let me say, Mr. Yannacone, there have been no new registrations that would have required the submission of any studies such as that, because most of the registration actions regarding DDT have been on what we call amendments to the registration and not new registrations.

Q: Fine. In other words then, the original, old, sometimes 20-year-old registration applications are simply amended to add or delete a new use, is that correct?

A: If it was a new use, it would have required additional data.

Q: In what type of circumstances would an amendment not require new data?

A: If it was for a use on which we had data that did not extend any additional exposure either to the applicant or to the consumer. . . .

Q: I see. Then in other words, if the DDT were approved for Dutch elm disease control 18 years ago and that the only consideration today with respect to further use in shade tree protection would involve no new data, because it's just another tree?

A: If it is exactly the same dosage, the same rate of application, the same formulation, and all we have added is one additional use, there would be no need for any extensive toxicological data.

Q: In other words, if the original application of DDT, approved in 1947 or 8, for forest pest control were two pounds per acre applied by hydraulic spray, let's say, or by airplane, and if today an applicator wanted to apply 1.9 pounds per acre to a different kind of tree, he would have to submit no further data?

A: I didn't say that.

Q: Well, explain to us in that sense, please, Doctor.

A: A gap of some 20 years would make quite a difference. If a product were registered a week ago and the applicator wanted to extend its use to another area, we would require no additional data over and above what he's just submitted. But we certainly do not look upon data submitted 20 years ago as adequate for present day needs. . . .

Q: Now when is the most recent data, new data, that's been required by your department or division on DDT that you know of?

A: We do not necessarily, Mr. Yannacone, require the applicant to supply additional data if, in the interim, data has already been published in the literature or where other sources have made available such information as we may have required in its absence.

Q: Doctor, I don't mean to pin you down; but I'm still trying to find out what if any data with reference to DDT is relied upon by your department to continue this registration?

A: We ask the applicant to supply that information which we do not have at this moment to support that registration.

Q: Dr. Hays, you have said that during the past two years amendments to DDT registrations have been permitted without new data being required; is that correct?

A: That is permissible.

Q: All right. Well, I don't know whether it's permissible, and I don't care whether it's permissible. I want to know if it has been done?

A: Yes.

Q: You are chief of the division that's responsible for this, right?

A: That's right.

Q: The technical responsibility is one level lower than your administrative assistant, is that correct?

A: Yes, sir.

Q: You confer with these individuals, staff member chiefs on these applications, is that correct?

Mr. Stafford: Your Honor, I object to this line of questioning, it is repetitious. We have gone over this hierarchy three or four times. We have a limited time of this witness, and I ask Counsel to direct his attention to new matters.

Mr. Yannacone: I'm trying---

Examiner Van Susteren: Well, perhaps the witness could answer the $64 question: Has any new specific information been submitted and received by Dr. Hays's division in regards to a DDT registration? Am I correct?

Mr. Yannacone: That's very close to the $64 question.

Mr. Stafford: Well, let's have an answer.

Dr. Hays: I know of no new data that has been submitted other than what we have available from the current literature on which we base a lot of the evaluation. . . .

Mr. Yannacone: Do you require as chief of this division, through your technical people, any evidence that a proposed use of DDT will not result in *translocation* of the material to plants other than the target plant?

A: It's usually directed to the target plant.

Q: That wasn't the question I asked you, Doctor. Answer the question I asked, if you can, or say you can't answer---

A: The target plant.

Q: Does your division require any data as to the migration or mobility of DDT after application other than through soils?

A: No.

Q: Does your division require any evidence of the sublethal effects of DDT or its metabolites on fish prior to registration or as a condition to registration?

A: We have required such data.

Q: What type and kind of data?

A: That has to be determined by the people responsible for this area.

Q: Who furnishes the data?

A: The applicant.

Q: It is not checked by your department?

A: It is not required to be checked by the department.

Q: And it isn't? . . .

A: The Act does not require our testing.

Q: And therefore you don't do it?

A: No.

Examiner Van Susteren: However, you did testify that in this type of a situation, it is given to the Department of the Interior?

Dr. Hays: That's correct, sir. . . .

Mr. Yannacone: Does your division have to accept the findings of the Interior Department? . . .

A: We seek the advice of the Department of the Interior for comments on the adequacy of the labeling and the data in support of the label.

Q: Doctor, adequacy of the label meaning, in other words, if it says on the label "Dangerous to Fish and Wildlife," is that sufficient?

A: This is where we seek the advice of the Department of the Interior.

Q: All right. And if the Department of the Interior says, yes, sir, indeed it is dangerous to fish and wildlife, are you satisfied that the product is registrable if it contains on the label "Dangerous to Fish and Wildlife"?

A: If that is what would be required, yes. . . .

Q: In other words then, Doctor, as long as the product's label says that it is in fact dangerous to fish and wildlife, the requirements of the Act and the duties of your division are satisfied, right?

A: I think we have one point to make, Mr. Yannacone---the words "Danger," "Warning," and "Caution" are used in terms of the human hazards.

Q: Right.
A: There has been no such terminology for fish and wildlife.
Q: All right. Would you stop a moment. Let's backtrack on that. In other words then, "Danger," "Warning," and "Caution" are not measures of damage to wildlife?
A: That's correct.
Q: They are measures of possible damage to humans based upon acute LD_{50} doses in rats plus some other indeterminate amount of information which may or may not be required, is that right?
A: That's right.
Q: Okay. Now with respect to vertebrate animals and beneficial invertebrates, what if any requirements are there?
A: There are precautionary statements on the label regarding the use of the material, "Keep out of ponds or streams" if it involves a hazard to the fish and wildlife.
Q: All right.
Examiner Van Susteren: Just a moment. Could the Examiner interrupt. It would seem to me there is an area of confusion here, and the area of confusion seems to be the labeling requirements and procedures and the registration requirements and procedures; and somehow or another it looks like these things are being used interchangeably and concurrently.
Mr. Yannacone: All right. . . . Is the labeling procedure part of the registration procedure?
A: Yes, sir.
Q: It is one single registration procedure, the basic end of which is a proper label?
A: Yes.
Q: All right. In other words then, Doctor, the requirements of the Act as far as your division is concerned are satisfied when you have got a proper label?
A: That's right. . . .
Q: If the label carries, or the manufacturer agrees to put on his label "Warning" or "Precaution, don't use near ponds and streams" and what not, then the requirements of the Act are satisfied to the extent that your division will now approve this registration?
A: That's correct.
Q: No further consideration then is given by your administration to fish and wildlife once this precaution is accepted?
A: Other than the review by the Department of the Interior. . . .
Q: Are you permitted to register a product which is apparently safe for humans but which is totally damaging to fish and wildlife, let's say has an acute mortality at very low levels; are you permitted to register such a product with a precautionary label?
Mr. Robertson: Mr. Examiner, I believe this testimony has been gone over before to the effect that [Dr. Hays's division] receives the information from the Department of the Interior, . . . and this

information is applied in connection with the registration and in connection with the enforcement or compliance with the provisions of this law.

Examiner Van Susteren: So it's quite obvious then after Interior's comments are received, it goes to your safety evaluation, and safety evaluation determines then whether the Interior's comments and guidelines are going to be accepted or not?

Dr. Hays: That's correct. . . .

Mr. Yannacone: This is not done then at your level, at the highest level; this is done down at a low level?

A: That's right.

Q: Now, Dr. Hays, I will rephrase that prior question. I apparently didn't make it clear to Counsel or anyone else. Can you refuse to register a pesticide solely on the grounds that it causes damage to non-target vertebrates?

A: This would be based on the intended use. We do not anticipate that the intended use would result in any such damage, and this is the reason for the precautionary statement by the Interior often requested "Do not use in areas where fish may be present."

Q: But, Dr. Hays, didn't you just testify that the only evidence of translocation you require or that you know of that is required is within the target plant, and the only evidence of migration is through soil; wasn't that your testimony?

A: That's in general, yes.

Q: What do you do with a substance that has mobility by mechanisms other than translocation through the target plant or migration through local application in the soil?

A: What do you mean, what do we do?

Q: Let's assume the Interior department advises you that a particular substance, in this case DDT, is co-distilled with water from a given application and can be transmitted miles and miles and miles away with water vapor?

Stafford now interjected, trying to help assemble the fragmented Hays. But Hays only succeeded in burying further the Pesticide Research Division by admitting that only two products had been cancelled in the past five years.

Mr. Stafford: Now referring to Section 4.c. of your enabling Act, which is the section for cancellation, have you had occasion in the past, Doctor, to cancel registered pesticides under this section? And please exclude from your consideration the many which were cancelled due to the change of nonresident policy. Other than those?

Dr. Hays: There have been two such actions taken since 1964; the first being the cancellation of all registered use of thallium. This was a highly toxic material used in the home and was responsible for a significant number of deaths among children. On this basis

the department decided that it was not in the public interest to continue the registration of a product that accounted for such a large number of fatalities.

Q: And there was another product also? Give the name.

A: There has more recently been a proposed rule-making regarding the registration of phosphorus paste. Again, this is a product that was registered many years ago, [that] has been responsible for a significant number of deaths. And in view of other materials of a less hazardous nature, the department decided to cancel these registrations.

Q: Now in view of your experience with prior cancellations and your knowledge of the Act, is it your opinion that the present law affords an adequate remedy to protect the public against registered pesticides which allegedly turn out to be harmful?

A: Yes, sir.

Then Yannacone heatedly began cross-examining Hays again.

Q: Now, Dr. Hays, let's tell this court right now what procedure is available should your department fail to heed whatever the decision is of the National Academy of Sciences, National Research Council, should they recommend the deregistration or the cancellation of the registration of DDT. What procedures are available other than the procedure in the statute that you set forth and was read by your counsel which provides for a proceeding initiated by the Secretary of Agriculture himself? Tell us what other procedures.

Mr. Stafford: Object to the question, because it has already been asked and answered.

Mr. Yannacone: Nonsense! All morning we have heard him tell us he doesn't know anything. And now suddenly he tells you?

Mr. Stafford: Counsel, you don't need to shout.

Examiner Van Susteren: Just a moment.

Procedure for what, for cancellation?

Mr. Yannacone: Cancelling that registration.

Examiner Van Susteren: All right. We'll go through it again, but---

Mr. Yannacone: No, other than the statute, Mr. Examiner, Section 4.c.

Examiner Van Susteren: We can only assume, Counsel, that if the National Academy of Sciences and so on, and the committee come up with a recommendation that it be banned, the only thing they could do would be to let the Secretary know under the Act, and the Secretary institutes the proceeding.

Mr. Yannacone: Is that a fair statement, Dr. Hays?

Dr. Hays: That's right.

Q: That's a fair and accurate statement of the procedure?

A: That's right. . . .

Q: Has your Safety Evaluation Staff given you any report on DDT since you have been in that department?

A: No.
Q: I see. May I ask who made the request of the National Academy of Sciences [for the DDT study]?
A: As I read, the United States Department of Agriculture. . . .
Q: You did participate in the deliberations that led to the departmental request [to study DDT]?
A: Yes.
Q: Did you review the material that formed the basis of this request?
A: Not all of it.
Q: Did you review any of it, Doctor?
A: Yes.
Q: All right. What kind of material did you personally review?
A: Data that was available in our files, data that was available in the literature.
Q: Such as, Doctor?
A: Some of the reports that you referred to.
Q: All right. Now you made an evaluation of this data personally, right?
A: No.
Q: You reviewed it, didn't you, Doctor?
A: Yes.
Q: Did you review it personally?
A: Yes.
Q: In what capacity? The stuff you reviewed personally---
Mr. Stafford: Mr. Examiner---
Examiner Van Susteren: Just a minute. You are badgering the witness. Give him a chance to answer. . . .
Mr. Yannacone: Doctor, look, you reviewed some of it, you said, in person. Okay.
Dr. Hays: Yes.
Q: I am only interested now in questioning you about what you reviewed personally. You said you reviewed some of the papers we have discussed, Dr. Stickel's and Dr. Macek's, right?
A: That's right.
Q: Those reports among others formed the basis of this recommendation, which you supported, which the department made to NAS through contract, right?
A: Yes.
Q: Now, Doctor, you reviewed this material. Did you evaluate it?
A: I evaluated only to the extent of my concern.
Q: What kind of concern, Doctor?
A: That adverse effects had been reported.
Q: All right. Now, Doctor, were these reports that you had part of any formal request to your department for action from the United States Department of the Interior?
A: The request---
Mr. Robertson: If you understand the question.

Mr. Yannacone: I will rephrase the question.

Doctor, you have stated for three hours that nobody's ever made a formal request to your department for review of the registration of DDT, is that correct?

A: That's correct.

Q: All right. . . . Let's go back a minute, Doctor. Your division is the only one responsible for the registration of pesticides, right?

A: Yes. . . .

Q: No other division in USDA?

A: That's correct.

Mr. Stafford: All been asked and answered, and I have objected to it many times.

Examiner Van Susteren: First of all, we have to recognize—and I am not impugning any Secretary of Agriculture—but involved in all of this, if a formal request came in to the Secretary of Agriculture and he did not pass it on down to Dr. Hays, or it got lost in the maze of bureaucracy, Dr. Hays would have no idea about it, and---

Mr. Yannacone: I know that. I am not binding him with what the Secretary wants to know. All I want to know is what he knows in his division.

Examiner Van Susteren: And he is telling you, Counsel.

Mr. Yannacone: Okay. Let me---

Mr. Robertson: He has told him, Mr. Examiner.

Mr. Yannacone: Well, that may very well be, but he apparently changes his mind and his recollection pretty conveniently.

Mr. Stafford: I object and ask it be stricken.

Mr. Yannacone: That's another question.

Examiner Van Susteren: That's another aside, Mr. Yannacone, and so on. I warned both Counsel yesterday that I was not going to tolerate these insinuations that are of a jeering, sneering nature so far as a witness is concerned. This borders on badgering. And while he is well represented by Counsel here today, the Examiner can only assume the responsibility to prevent any badgering.

Mr. Yannacone: I don't want to badger Dr. Hays. All I want is to get a relatively clear record of a very complicated system. This is pretty obvious from the past three hours.

Now you in your division are solely responsible for pesticide registration, right; this division?

A: That's correct, the division, yes.

Q: Now your department, the United States Department of Agriculture, which is chaired by a Secretary of Agriculture, who is a political appointee and who filters his information or whatever down to you through some other kind of channel, has made a formal request coupled with a financial grant to the National Academy of Sciences, National Research Council, for a certain review of pesticides, correct?

A: Yes.
Q: Okay. Now among the pesticides reviewed are persistent pesticides, right?
A: That's correct.
Q: One of those persistent pesticides is DDT, right?
A: That's correct.
Q: All right. Now I asked you before, and you said you did participate in the departmental level group that supported this application for a review, right?
A: That's correct.
Q: Okay. And you did testify that you supported this application because of concern that you had as a result of some studies which you had personally seen, is that correct?
A: That's right.
Q: This included Dr. Stickel's and Dr. Macek's studies. Right?
A: That's correct.
Q: Did it include anybody else's study that you recall, like Dr. Risebrough?
A: I don't recall what other studies it involved, your Honor. [It involved] a lot of discussions and a lot of our experiences with use of persistent pesticides as they pertain to food and feed crops, the problems that have arisen in relationship to the tolerances established for persistent pesticides, and in particular DDT. There was a whole area of problems that the Department of Agriculture concerned itself with, and therefore asked that we submit a request to the National Academy of Sciences to look at this problem as a whole, not just one isolated problem.
Q: Fine. Now, Doctor, your division is the only division of the Department of Agriculture that has direct responsibility for pesticide registration, is that correct?
A: I think I have answered that before, sir.
Q: All right, and a number of times, and the answer is yes.

Now, Doctor, the Academy of Sciences, National Research Council, is going to render a report, is that correct?
A: That's correct.
Q: That report is going to be to the United States Department of Agriculture, is that correct?
A: That's correct.
Q: Now I think you testified that if that report is accepted by the department, then some action may be taken, is that correct?
A: That's correct.
Q: All right. Now other than this request to the National Academy of Sciences, National Research Council, has your division to your knowledge requested any reviews of information concerning the persistent pesticides such as DDT during the two years you have been there from any agency, including the U.S. Department of the Interior?
A: No, sir.

Yannacone, Van Susteren, Hays, Robertson, Stafford, and the packed hearing room then decended into a maze of bureaucratise that left everyone dazed. Arguments raged back and forth over who was on first, and if whoever was on first knew what the person on second was doing. This comedy of bureaucratic errors, with Van Susteren as umpire, centered around the forms of questions, and levels of responsibility, and succeeded, perhaps, only in mirroring the decay of the English language as a functional mode of communication among government agencies. After verbiage had filled the air for some ten pages of transcript things got rolling again.

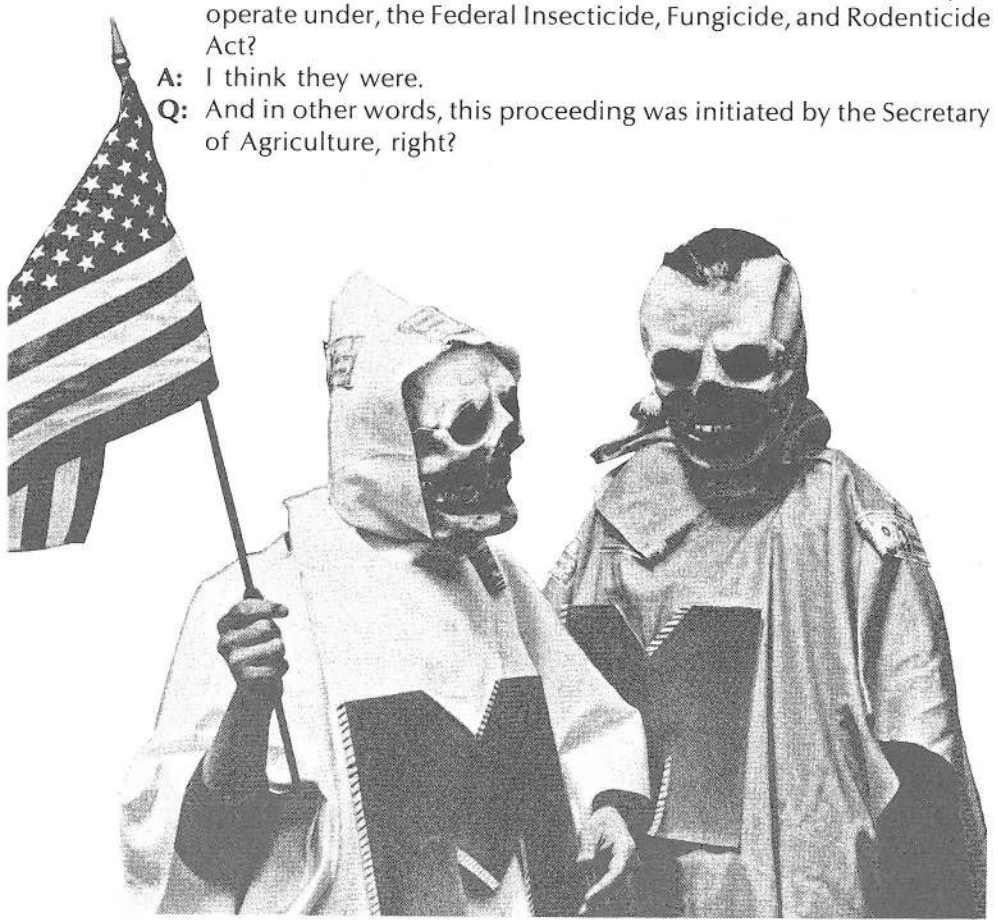
Mr. Yannacone: Now, Dr. Hays, you testified that there were two cancellations of registration of pesticides since 1964, thallium and phosphorus paste; right?

Dr. Hays: That's right.

Q: All right. And you testified that these were because of their obvious human toxicity. All right? Now, Dr. Hays, will you tell us whether or not these cancellations were effected in accordance with the procedures described in Section 4.c. of the Act that you operate under, the Federal Insecticide, Fungicide, and Rodenticide Act?

A: I think they were.

Q: And in other words, this proceeding was initiated by the Secretary of Agriculture, right?



A: That's correct.

Q: All right. Now do you know of any procedure whereby a private citizen or a group of citizens can initiate a proceeding for cancellation of registration?

Mr. Stafford: That has been asked and answered.

Examiner Van Susteren: We have gone through this, Counsel, so many times, and we aren't going to hear any more. The procedure is outlined in the Act.

Mr. Yannacone: And that's all? There's no way around it?

Examiner Van Susteren: That's what the witness has testified about ten times.

Mr. Yannacone: All right. Now you were on this committee, Doctor, that made the application through the Department of Agriculture itself to the National Academy of Sciences, the National Research Council, to conduct this 18-month study on pesticide residues. . . . Did this committee issue a report to the Secretary of Agriculture?

A: I think we did.

Q: Did you sign that report as one of the participants?

A: I did.

Q: Do you have a copy of that report?

A: I'm sure I must. . . .

Q: Doctor, was any other technical or scientific information submitted to the Secretary, if you know, than your committee report?

A: I don't know of any technical or scientific data that was submitted.

Q: Okay. In other words then, your committee report furnished the technical and scientific information, right?

A: Formed the basis of our concern and the request that a study be made. . . .

Q: Dr. Hayes, in the regular course of your professional activities have you had occasion to examine any scientific data or studies with respect to toxic effects, lethal and/or sublethal, of DDT and its metabolites on non-target organisms?

Mr. Stafford: Objected to as repetitious.

Mr. Yannacone: I haven't gotten an answer to that question in four hours.

Mr. Stafford: Probably not going to get one.

Excuse me.

Mr. Yannacone: Then if he can't answer, let him say so.

Examiner Van Susteren: Just a moment, Counsel, just a moment. This refers to Dr. Hays professionally and not necessarily as the administrator of the division?

Mr. Yannacone: Right.

Examiner Van Susteren: And he is a professional witness.

Can you answer the question? Have you ever done any work in that respect?

Dr. Hays: Research?

Mr. Yannacone: No, I didn't ask research, I asked---

Dr. Hays: Your Honor, I think I have stated a number of times that I have reviewed documents, published and unpublished, that relate to a variety of pesticides, including DDT.

Q: All right. Now, Doctor, did you concur in the request of this committee to the Secretary to engage the National Academy of Sciences and the National Research Council to evaluate pesticides in accordance with this contract?

A: Your Honor, I stated that I signed the report.

Q: Well, does that mean you concurred in it?

A: I must have.

Q: Is this report a public document?

Examiner Van Susteren: It is now, Counsel.

Mr. Yannacone: Could you produce it for this hearing; if you went back to Washington, would you be willing to produce a copy of it?

Examiner Van Susteren: I thought you were referring merely to the newspaper, or to the announcement of the department.

You will have to address that question to Mr. Robertson. He represents the Department of Agriculture. . . .

Mr. Yannacone: Does this report which you signed represent fairly and substantially the substance of your professional opinion on the subject matter contained therein?

A: Yes.

Mr. Yannacone: Fine. Now I will call upon the witness to produce that report as representative of the substance of his professional opinion.

Examiner Van Susteren: You will have to ask Mr. Robertson. He represents the United States Department of Agriculture, and Mr. Robertson will decide whether that material will be secured or presented, and not the witness. . . .

Mr. McConnell: If it please the Examiner, I would like to interrupt for a moment. I would like to direct the question to Mr. Robertson, and ask if he would furnish to this hearing a copy of the letter.

Mr. Robertson: And for the record, I will state that when I return to Washington, I will, number one, attempt to find this document; it is something over a couple of years old; I don't know whether it's available---

Mr. Yannacone: June 30, '67.

Examiner Van Susteren: Just a moment, you are interrupting, Counsel.

Mr. Robertson: If I may finish, Mr. Yannacone, without any remarks---

Mr. Yannacone: Excuse me.

Mr. Robertson: Number one, that would be the first determination. Then an evaluation will be made, and hopefully that document will be furnished to this hearing.

Mr. Yannacone: An evaluation by whom?

Mr. Robertson: To determine whether or not it is in compliance with departmental regulations to disclose the contents of this document. It is interoffice correspondence. There are regulations with

respect to disclosure of that type of correspondence that I am not that well versed in, and I will admit it.

Mr. McConnell: Excuse me. Assuming there is no formulization material in this, might we assume that we would then be able to receive this document in due course upon your return?

Examiner Van Susteren: Well, first of all, the Examiner has ruled several times that the work of what this committee did and said and deliberated and so on, one, had no relevancy and materiality, and it merely represented [Dr. Hays's] professional judgment. We could be here for the next ten years probing Dr. Hays's mind.

Mr. Yannacone: Now, Dr. Hays---

Mr. Stafford: Is that a ruling?

Examiner Van Susteren: That's a ruling. If Mr. Robertson doesn't want to submit it, then it won't be submitted.

Mr. Yannacone: Dr. Hays, we don't want to probe your mind. I just want to ask you, will you summarize for the record now just what your professional scientific independent judgment is with respect to the subject matter of that investigation, [not] persistent pesticides in general, but only with respect to DDT in particular?

Mr. Stafford: Object to that on the grounds of relevancy.

Examiner Van Susteren: If the witness wants to render an opinion and so on, he may do so. If he does not want to give his professional opinion as requested, he need not do so.

Depends upon you, Dr. Hays, whatever you want to do.

Dr. Hays: I would rather not do so.

Examiner Van Susteren: All right.

Mr. Yannacone: You will not do so?

Examiner Van Susteren: Just a moment, Counsel. I warned you before I don't want you making remarks like this to the witness. This borders on badgering the witness. Now just ask your next question.

Mr. Yannacone: All right. Doctor, tell us why you don't want to render a professional opinion.

Mr. Stafford: Object to the question.

Examiner Van Susteren: And the objection is sustained. He has a right to have an opinion or not. And if he doesn't want to give an opinion---

Mr. Robertson: Mr. Examiner---

Examiner Van Susteren: ---then he isn't going to give his opinion.

Mr. Yannacone: Doctor, do you have an opinion?

Mr. Stafford: Object.

Mr. Yannacone: Maybe I should have asked you that first.

Mr. Stafford: Objected to for the same reason.

Examiner Van Susteren: If the witness has an opinion and he wants to state yes or no, he can answer it yes or no. However he desires.

Dr. Hays: Your Honor, you gave me a choice, and I chose the one that I gave you.

Examiner Van Susteren: So you are not going to express an opinion?

Dr. Hays: Since the Examiner gave me the choice of either responding or not responding, I chose not to respond.

Mr. Yannacone: Mr. Examiner, may I ask for a ruling from the Examiner that this witness should either render such an opinion or state he has no such an opinion. Since when is a witness who has testified on examination by Mr. Stafford as to [the] certain harmless[ness of] and protection of the populace from the hazards of DDT, permitted to say: I don't want to now render an opinion?

Examiner Van Susteren: His direct testimony concerned registration procedures. As to whether Dr. Hays has an opinion or not at the present time, is up to Dr. Hays. He stated that even if he had an opinion, he did not want to render it. And we will let it go at that.

Mr. Robertson: Furthermore, Mr. Examiner, Dr. Hays said he had signed this report, or whatever it was. It is a document that's two years old.

Mr. Yannacone: All right. Dr. Hays, has your independent professional scientific opinion, whatever that might be, changed since you signed that document?

Mr. Stafford: Mr. Examiner, this circuitous manner of evading the ruling---

Examiner Van Susteren: The objection is sustained.

Mr. Stafford: I object to any further questions along that line.

Examiner Van Susteren: The objection is sustained.

Mr. Yannacone: All right. Dr. Hays, is there any independent scientific evaluation of the data submitted by an applicant for registration or reregistration of a pesticide, in particular one such as DDT, made in the regular course of business of your department?

A: I think I so stated that the evaluation staff makes the review.

Q: Is the data, Doctor, on which the evaluation staff makes its review available for examination in the regular course of business of your department to outsiders who are not members of your department?

A: No, sir.

Q: Is it treated, to your knowledge, as privileged or confidential material?

A: This is treated as privileged and confidential.

Q: And it is not evaluated by any outside agency other than your technical staff of people at the levels you described?

A: Except the interagency people.

Q: Is the actual scientific data available to the interagency people?

A: Yes, sir. . . .

Q: Is it possible for any party other than the duly authorized representative of Health, Education and Welfare or the Secretary of the Interior, as set forth in this memorandum of understanding [previously mentioned in testimony], to review or examine those registration statements for DDT?

Mr. Robertson: Mr. Examiner, I believe we went into this this morning with respect to disclosure of information which is covered by certain federal laws and also departmental regulations.

Mr. Yannacone: Let's spell it out.

Mr. Robertson: Specifically is Mr. Yannacone asking the question: Can any outside person request this information?

Mr. Yannacone: There are two aspects of this memorandum of understanding, and I think we had better get it clear for the record. Dr. Hays, this understanding provides that each department will designate a scientist to act on behalf of such department in carrying out the terms of this agreement.

Who represents your department, Doctor?

A: Dr. Anderson.

Q: And who represents Health, Education and Welfare, if you know?

A: Dr. Kirk.

Q: And who represents the U.S. Department of the Interior?

A: Dr. Johnson.

Q: Now are the registration statements and the data submitted therewith available to anyone other than those named individuals, to your knowledge?

Mr. Robertson: Mr. Examiner, I believe he stated there is a free transmittal of information between the three agencies. Now is he trying to limit, in this question to Dr. Hays, that this information is only transmitted at this level of the three individuals that Dr. Hays has named? I would like to know specifically where we are, so Dr. Hays can answer the question.

Mr. Yannacone: I will explain it a little bit more clearly. . . .

Is it possible for anyone other than the named three individuals who are specifically authorized to act under this agreement in accordance with the provisions of Section 2.a. thereof, is it possible for any other individual in the U.S. Department of the Interior or the U.S. Department of Health, Education and Welfare to secure this registration data, the actual data on the registration of DDT and its related analogs? . . .

Is there anyone else? That's all I want to know.

Examiner Van Susteren: That he knows.

Do you know of anyone else who would have the authority?

Dr. Hays: No.

Examiner Van Susteren: All right, he doesn't know.

Mr. Yannacone: Okay. Now one more question.

Is it possible for any member of the general public to make an application to examine those documents? Is there any procedure in your department whereby such application can be made that you know of? . . .

Dr. Hays: Not to my knowledge, no.

Q: Is there any procedure whereby such information may be subpoenaed or made available; any request you have to honor other than the three-agency agreement here? . . .

Mr. Robertson: Mr. Yannacone, when letters come into the department or people come into the department requesting to examine certain documents on file with the department—and those documents necessarily are usually specified to some extent, because there are a number of documents—this matter is referred to a division within the Office of the General Counsel, a unit I am not in myself, to determine whether or not it would be in violation of the Public Information Statute, the Freedom of Information Law, and the Department of Agriculture regulations issued pursuant thereto. Once this determination is made on this particular request, the person so asking for the documents is informed, here are the documents, or is further informed that pursuant to the applicable provisions, the information cannot be furnished. But this request, if it came in to Dr. Hays or any other administrative official in the United States Department of Agriculture, would be referred through normal channels for this determination. . . .

Mr. McConnell: With regard to the cancellations that have taken place to date, have any reviews for cancellation purposes been instituted by your division, to your knowledge or since you have been there, for any purposes other than lethal effects upon the human population of this country?

Mr. Robertson: You understand the question, Doctor?

Dr. Hays: Yes.

Not to my knowledge.

Q: And the two cancellations that did take place, were they both prior to 1966?

A: One was prior to '66. The other was in '68. . . .

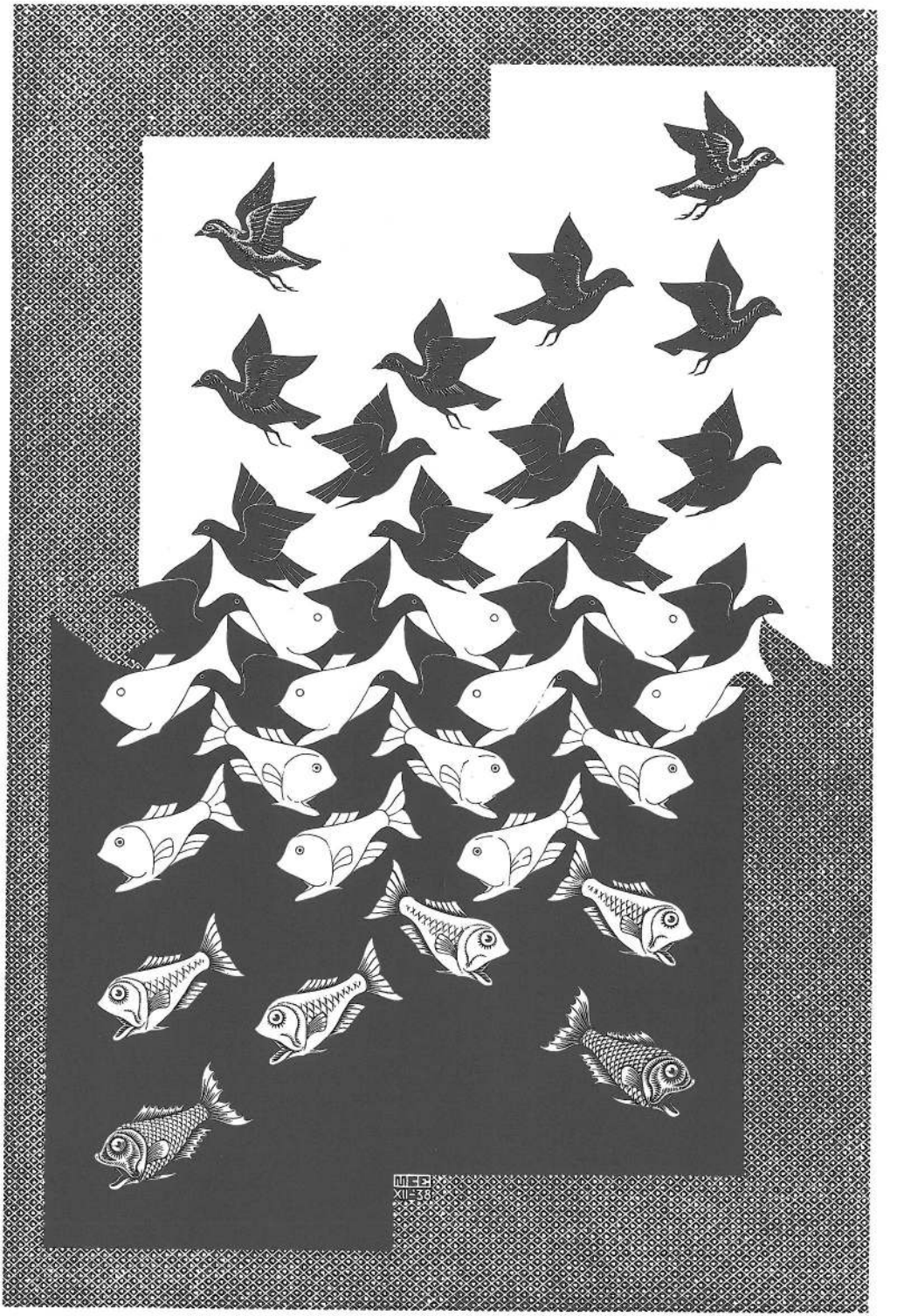
Mr. McConnell: I have no further questions. . . .

Examiner Van Susteren: If there is nothing further of the witness, he will be excused.

You are excused.

But Harry Hays wasn't really excused. Perhaps as a result of the bad showing he made at Madison, he was forced to make another public appearance before a congressional subcommittee in May headed by Congressman Fountain of North Carolina. At that hearing further data on the blatant inefficiency of the Pesticides Research Division came to light.

Whether the hearings in Madison and those in front of the congressional committee will lead to definitive changes in the procedures under which the public is protected from pesticides is questionable at this point, but what they certainly did was to open the eyes of many people to the machinations of the men who, through neglect, can poison the world.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