



International Association of Defense Counsel

Trial Academy

*David Otis Wilson and
Debra B. Wilson*

v.

*The Roe Chemical
Company, Inc.*

**Faculty Hypothetical
(Product Liability – Personal Injury Case)**

INTRODUCTORY NOTE

The *Wilson v. Roe* hypothetical will be used for the faculty demonstrations during the International Association of Defense Counsel Trial Academy. This hypothetical problem is designed to simulate the material that one would receive on the eve of trial. Faculty members will demonstrate trial techniques and tactics using this hypothetical. Students will not use this fact scenario for student demonstrations, but students should familiarize themselves with the facts for better understanding of the faculty demonstrations. Advance preparation will serve you well during the Trial Academy.

All years in this problem are hypothetical and are stated in the following form:

YR-0 indicates the actual year in which the case is being tried (i.e., the present year);

YR-1 indicates the next preceding year (i.e., the present year minus one);

YR-2 indicates the second preceding year (i.e., the present year minus two); etc.

The day of the week that may be stated in the problem may not coincide with the date on the calendar. In the case of conflict, the date applies and the day of the week should be adjusted accordingly.

*****Due to a heavy backlog in the court system, this matter is just now going to trial.***

IADC TRIAL ACADEMY

Wilson v. Roe

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OVERVIEW OF THE FACTS

The Defendant, The Roe Chemical Company, Inc., produces and sells a liquid weed killer called Pre-Merge Dinitro. It is manufactured and sold in five-gallon containers. Its net profits were \$20 million in the most recent fiscal year and 100% of its profits are derived from sales of products manufactured at its facility in Franklin. At the time of the accident, David Wilson was a 49 year-old farmer. He bought the product from defendant's outlet store. While attempting to pour from the container, either the container or the plaintiff slipped and the weed killer splashed over his body. He was diagnosed with a progressive nerve and muscle disease. Wilson sued the Defendant under the State of Roosevelt's product liability statute, which allows the fault-based defense of comparative negligence with a finding of 51% negligence on the part of the plaintiff being a bar to recovery. The statute and case law provide for a "risk utility" analysis and defense. The applicable statute of limitations is three years.

The Plaintiff bases his claims on Defendant's failure to warn, i.e., the Defendant's warnings on the label attached to the container were inadequate and the container was defectively designed and therefore was unreasonably dangerous for its intended and foreseeable uses. Defendant Roe denies that the product was in a defectively designed container and that the warning was inadequate, and Defendant asserts the defense of comparative negligence. Plaintiff seeks recovery of medical expenses, impaired earning capacity, physical and mental pain and suffering, loss of enjoyment of life, and punitive damages. Plaintiff's wife, Debra Wilson, also brings a claim for loss of consortium.

Roosevelt's case law provides that federal labeling statutes do not pre-empt state tort claims based on inadequate warnings or instructions. It also provides that a defendant is entitled to a presumption that a warning or instruction that is provided will be heeded by its recipient (a jury instruction will be given on this issue). This presumption is rebuttable.

Evidence indicates that the subject container was shipped from the factory almost two months prior to Plaintiff's purchase. During this interim shipping period, but prior to Plaintiff's purchase, Roe decided to change the label to include additional language concerning the danger of absorption. The state evidentiary rule with respect to subsequent remedial measures mirrors the Federal Rules of Evidence. State law does not permit bifurcation as a matter of right. It is discretionary with the court on motion by either party.

**IN THE CIRCUIT COURT OF FARRAH COUNTY
STATE OF ROOSEVELT**

DAVID OTIS WILSON and)	
DEBRA B. WILSON,)	
Plaintiffs,)	Civil Action No. YR-4-1001
)	
v.)	
)	
THE ROE CHEMICAL COMPANY, INC.,)	
Defendant.)	

COMPLAINT AND JURY CLAIM

Now come the plaintiffs, David O. Wilson and Debra B. Wilson, and for their causes of action against the defendant, The Roe Chemical Company, Inc. state:

FACTUAL ALLEGATIONS

1. The Plaintiff, David O. Wilson, (hereinafter “Wilson”) is a natural person residing in Franklin, Roosevelt.
2. The Plaintiff, Debra B. Wilson, is a natural person residing in Franklin, Roosevelt who at all material times was married to David O. Wilson.
3. The Defendant, The Roe Chemical Company, Inc., (hereinafter “Roe”) is now and was at all material times a corporation organized and existing under and by virtue of the laws of the State of Roosevelt with its principal place of business at Route 3, Franklin, Roosevelt.
4. At all material times, Roe manufactured, sold, and distributed a weed-killer known as “Pre-Merge Dinitro” (hereinafter “Dinitro”).
5. On Saturday, July 29, YR-5, Wilson purchased the product Dinitro from Roe’s outlet store, “Roe’s Chemical Outlet,” located at 538 Fifth Street, Franklin, Roosevelt.
6. While using the product, on Friday, August 4, YR-5, Wilson was exposed to the weed-killer. Some of the chemicals in the product were absorbed into Wilson’s bloodstream.
7. As a direct result of this absorption, Wilson developed peripheral neuropathy and myopathy of his entire nervous system and body, resulting in all of the nerves, muscles, and tissues of his body becoming severely and permanently damaged, atrophied, and weakened.

8. As a result of his exposure to Dinitro, Wilson has and will continue to suffer severe pain, numbness, cramping, extreme fatigue, and total impotence.

9. Because of his pain and the permanency of his injuries, Wilson has suffered severe emotional distress and has permanently lost his ability to function as a farmer; he is fearful of developing cancer.

10. As a result of the aforesaid injuries, Wilson has incurred medical expenses in the sum of \$15,000 and will be required to expend large sums of money for further care and treatment in the future.

COUNT I

11. The Plaintiff, David O. Wilson, repeats and realleges Paragraphs 1-10 inclusive as if specifically set forth herein.

12. The Defendant's product directly and proximately caused Wilson's injuries and damages, and was and is unsafe for its intended purpose and created an unreasonable and hazardous condition.

13. The Defendant is liable under the State of Roosevelt's Manufacturer's Liability Statute by reason of:

- (a) failing to provide adequate warnings of the inherent danger of the product;
- (b) failing to provide adequate directions for safe and proper use of the product;
- (c) placing a dangerous product in the stream of commerce; and
- (d) designing, manufacturing, and marketing a container that was defective and was unreasonably dangerous for its foreseeable and intended use.

WHEREFORE the plaintiff, David O. Wilson, states that he has been damaged by the Defendant in the amount of \$2,500,000 and demands judgment in that amount, together with interest and costs.

COUNT II

14. The Plaintiff repeats and realleges paragraphs 1-13 of Count I.

15. The Defendant's product was negligently formulated, manufactured, and packaged.

16. The Defendant's said negligence was a direct and proximate cause of Wilson's injuries.

WHEREFORE the plaintiff, David O. Wilson, states that he has been damaged by the Defendant in the amount of \$2,500,000 and demands judgment in that amount, together with interest and costs.

COUNT III

17. Plaintiff, Debra B. Wilson, repeats and realleges paragraphs 1-16 of Counts I and II.

18. As a direct and proximate result of the injuries sustained by her husband Wilson, the Plaintiff, Debra B. Wilson, has lost and will lose in the future the services, society, companionship, and consortium of her husband.

WHEREFORE the plaintiff, Debra B. Wilson, states that she has been damaged by the Defendant in the amount of \$1,000,000 and demands judgment in that amount, together with interest and costs.

COUNT IV

19. Plaintiff, Debra B. Wilson, repeats and realleges paragraphs 1-18 of Counts I - III.

20. As a direct and proximate result of the injuries sustained by her husband, David O. Wilson, Plaintiff, Debra B. Wilson, has been required to remain home to care for her husband and operate the farm and has been unable to continue her college studies and therefore will suffer a loss of future earning capacity.

Wherefore the plaintiff, Debra B. Wilson, states that she has been damaged by the Defendant in an amount in excess of \$250,000 and demands judgment in that amount, together with interest and costs.

COUNT V

20. Plaintiffs, repeat and reallege paragraphs 1-19 of Counts I - IV.


21. The Plaintiffs claim that they are entitled to punitive damages as a result of the Defendant's strict liability and demand damages in an amount sufficient to punish the Defendant and deter such conduct.

WHEREFORE the plaintiffs demand judgment in an amount to be determined by the jury.

JURY CLAIM

Now come the Plaintiffs and demand a trial by jury of claims set forth in this Complaint and any subsequent amendments thereto and responsive pleadings.

The Plaintiffs,

By: 

By their Attorneys,
Alfred Thomas Allworth, Esquire
Allworth, Taylor, Lindner & Alton
31 Fifth Street
Franklin, Roosevelt 30640

Dated: July 27, YR-4

**IN THE CIRCUIT COURT OF FARRAH COUNTY
STATE OF ROOSEVELT**

DAVID OTIS WILSON and)	
DEBRA B. WILSON,)	
Plaintiffs,)	Civil Action No. YR-5-1001
)	
v.)	
)	
THE ROE CHEMICAL COMPANY, INC.,)	
Defendant.)	

**DEFENDANT’S ANSWER,
AFFIRMATIVE DEFENSES, AND JURY CLAIM**

ANSWER

Now comes the Defendant, The Roe Chemical Company, Inc., and for its answer to the Complaint states the following:

1. The Defendant admits paragraphs 1-4 of the Complaint.
2. The Defendant is without information sufficient to admit or deny the allegations contained in Paragraph 5.
3. The Defendant denies each and every other allegation contained in every other paragraph of the Complaint.

AFFIRMATIVE DEFENSES

First Affirmative Defense

The Defendant adequately warned all users of the product, Pre-Merge Dinitro, of the potential danger of improper use thereof, by affixing appropriate warning labels to each container.

Second Affirmative Defense

The warnings on the label were submitted, along with all tests to the relevant agencies of the United States government. These agencies approved both the label and the sale of the product.

Third Affirmative Defense

The container was not defectively designed and was reasonably safe for its intended use.

Fourth Affirmative Defense

The Plaintiff's own negligence proximately caused whatever damages he claims in that he did not exercise ordinary care for his own safety in handling the product or the container, and Plaintiff's recovery is barred or reduced as a result of such negligence.

Fifth Affirmative Defense

The Plaintiff did not use the product in the manner intended by this Defendant.

Sixth Affirmative Defense

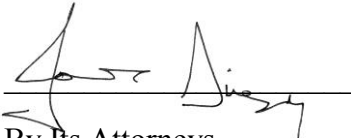
The Plaintiff knew of and assumed the risks associated with use of the product.

WHEREFORE, having fully answered all counts of the Complaint, Defendant prays to be dismissed with costs.

JURY CLAIM

The Defendant demands a trial by jury as to all allegations set forth in the Complaint, this Answer, and any further responsive pleadings.

Respectfully submitted,
The Defendant,



By Its Attorneys,

Joshua Digby, Esquire

Irwin, Allen, Digby &
Cleveland,

384 Fifth Street

Franklin, Roosevelt 30640

[Certificate of Service on Plaintiffs' Attorneys]

STATEMENT OF DEBRA WILSON

My name is Debra Wilson, and I am David Wilson's wife. At the time of David's accident we had been married for two years. I am 33 years old. David has a son George from a prior marriage who lives with us. What has happened to David has greatly affected our marriage and our life. David is my third husband, and we are trying to keep our marriage together. We had planned to have a child but David's impotence has changed all that. His inability to have sex has devastated him emotionally. Before the accident, we had sex two to three times a month, but because of his impotency, we don't have sex now and whatever tenderness he had for me is gone. I've tried talking him into seeing a marriage counselor or taking Viagra but he won't. Now he can't even walk without getting tired.

On August 4, YR-5, the day of the accident, I was in the kitchen baking and washing dishes. There is a window over the sink, so I saw and heard what happened. David was about 60 yards away — I'm not too good on judging distances. The window was half up. I remember being angry because as usual David was doing all the work. George was off somewhere else doing God knows what. George can't get a job because of his drug and legal problems and his bad attitude. To tell you the truth, I'm scared stiff of George. He looks at me strange all the time; at least, I think he is looking at me, if you know what I mean.

They were working around the truck and tractor that day, and it was about noon. I was looking out the window watching David because I am always nervous about the way he handles chemicals. David put the Dinitro container on the bed of the pick up truck to pour it. That's the only safe way; otherwise it will spill. That's the way all of the farmers around here do it. His back was to me so I couldn't see exactly what he was doing. I looked down for just a minute and then I heard a yell and a clatter. I looked up from my dishes and saw David on the ground, soaked with that horrible chemical. George was just standing there looking at him. I rushed out of the house and saw David washing himself off at the faucet. He was cursing. George said something like, "It happened again, didn't it?" I yelled at David that I had warned him about being careful with those chemicals. He shrugged and said he had 30 years' experience, and nothing like that had bothered him before. I don't know what he meant by that. I'm sure he's never spilled any chemical on himself before.

David is very careful about everything he does on the farm. The accident wasn't his fault. We went inside our house, and he scrubbed himself raw in the bathtub. He didn't seem worried, but, just in case, he followed the instructions on the Dinitro label. I read it, and it seemed to say that if you washed it off, nothing would happen. What a lie! Then I burned the clothes he was wearing.

At the time of the accident, David was in wonderful shape for a 49 year-old man. He had a job in town and ran the farm – with precious little help from that son of his. He's always had a little arthritis, but a week after the spill he started getting weaker and weaker. He fell down in the field and got real scared. Finally, after about a month of this, I took him to Dr. Weeks. He told David that his arthritis was getting worse, and he was simply working too hard for a man who was almost 50. That was bunk. David then went to a specialist, who made the diagnosis of the muscle disease caused by the chemicals in the Dinitro.

David can't work now. We can't pay the bills, especially for his 19-day hospital stay. These doctors tell me he will not get any better. Hopefully he will, if he doesn't die of inactivity first. He's just wasting away, sitting in a chair watching TV all day long.

Since we can't afford to hire anyone to run the farm, I've had to quit college and go back to work at Sam's Bar here in Franklin where I work 20 hours a week and earn \$5 an hour. For the past four years, I had been taking accounting courses at Franklin City College as a part-time student. I planned to complete my college courses over the next four or five years and then work for a C.P.A. firm in Des Moines or some other big city. It doesn't look like that's going to happen now.

I met David at Sam's Bar. I don't like the work because the men are always coming on to me. David put up a fight about my going back to work there, but we really need the money and there aren't any other jobs in town that I can get.

My life was a mess before I met David, but he helped me turn it around. Before the accident he was a wonderful husband and provider. He works — or worked — 14 hours a day before the accident. We went on food stamps last month. It humiliated David when I went to the state office and signed up for those benefits, and it embarrasses him every time we use them in town. He's a very proud man. He's so different now than he was before – he is withdrawn, moody, and impatient.

July 15, YR-4.

[Statement given to Plaintiffs' attorneys]

STATEMENT OF GEORGE WILSON

My name is George Wilson. I'm 21 years old, and I live in a room over the barn on my father's farm. My mother and father split up when I was 15 and then my father married this cocktail waitress he met in a bar; her name is Debbie. I think she talked my dad into leaving my mother. I don't like her and she doesn't like me. That's why I live in the room over the barn. My mom moved back to live with her parents, and I don't see her more than once a year at Christmas. I work hard and really run the farm, especially now that my dad can't work. I don't get paid anything regular but my dad gives me money when I need it and has promised that I'll get the farm when he retires.

I've had a few problems with the law in the past four years, mostly because the local cops don't like me and are always looking to hassle me. Debbie's brother works on the police force, and I am sure he has a lot to do with that. About three years ago, I was stopped for making an illegal turn and the cops found about an ounce of pot in my truck. It was a bogus bust; the stuff wasn't even mine, but I didn't have much of a chance winning that argument. The judge gave me a choice of 6 months in jail or 3 months in rehab if I admitted I "had a problem." I spent 3 months at the clinic in Cedar Rapids. Then for six months I had to give a urine sample every week to the local probation department.

My dad was pretty cool about the drugs, and he told me one night that he done his fair share of partying when he was in the army. Debbie, on the other hand, is a real pain in the ass about it, always giving me grief and calling me a stoner and telling my father that I'll never amount to anything and that I don't deserve to get the farm when he retires.

Debbie's way too young for my father, and they have never gotten along. She still hangs out at Sam's bar in town on some nights when my father is too tired to stay up and she was doing that even before the accident when he had to work the night shift when they did inventory at the plant. She loves all of the attention the men give her. Even before the accident, they used to argue about her hanging out there and coming home loaded. She doesn't like me, and the feeling is mutual.

I was helping my dad on the day of the accident. He was in the back yard, about 100 yards from the house, right next to the barn. I had gone inside the barn to get my pair of gloves to wear and had just come out when I saw him put the can of Dinitro on the edge of the tailgate of the pick up truck. He was tilting the can with his left hand and balancing the 1-gallon pail with his right hand on top of his right leg. I could just tell he was going to spill that stuff on himself again. The Dinitro came pouring out the 5-gallon container and all over him again. He was soaked. He's really not as careful as I am around those chemicals. I spilt some of that Dinitro on my hands last month, and I had a fever for a week. I was real sick, but I still went to work.

When it happened to me, I read the label and I remember saying to him, "hey Dad, did you ever read the bad things they say this stuff can cause?" and he told me he doesn't read labels anymore "because they all say the same thing and they're just trying to scare you into being careful." After spilling the stuff, Dad looked real concerned, and glanced at the container. It almost was as if he hadn't read the label before. He did have his gloves on, I remember that. He ran over to the faucet and washed himself off. By then Debbie was coming up to us, and she was yelling at me. She must have been looking out the window while she was sitting in the kitchen reading one of her magazines. Of course she blamed me for not doing the filling as if she ever lifts a finger or knows anything about farm work.

They went inside, and an hour later Dad came back out and we finished our chores. I asked him how he felt, and he said, "Fine." He said that he followed the directions on the label about what to do if there was a spill and that he wasn't concerned.

A few days after the spill I noticed that Dad didn't look so good. I thought he was getting sick just like I had gotten sick but he shrugged it off. I got concerned when he started to lose his balance and began to fall a lot. I didn't see him fall but he would come in from the fields and tell me. When he told me, he looked real worried. At first he tried to joke about it, saying that his arthritis was acting up. Then he began to fall more often and got weaker and soon he couldn't do any work. Finally he went to a slew of doctors. He's not much better. It's been a drought year, and the crops are doing bad. It would help to have an extra hand, but we can't afford it.

August 10, YR-4.

George Wilson

[Statement made to Plaintiffs' attorneys and made available to Defendant's attorney during discovery]

EXCERPTS FROM DEPOSITION OF DAVID WILSON

(Taken on October 26, YR-4)

Q. Please give us your full name, date of birth, and address.

A. David Otis Wilson, November 18, YR-55. I live on Route 4 here in Franklin.

Q. What's your wife's name?

A. Debra - Debbie. We got married in YR-7. I have one child George who was born in YR-25. He lives with my wife and me on the farm. Debbie and I don't have any children. When we got married we planned on having a couple, but that was before that chemical made me impotent.

Q. What do you do?

A. I'm the farm manager for Consolidated Farming, Inc. I've been working for Consolidated for the past 15 years or so. I also have my own little farm. It's 53 acres, and I've been farming that land for over 30 years. We grow corn, wheat, and soybeans.

Q. Okay, first let's talk about your job with Consolidated Farming. You said you have been with the company for about 15 years; what is your wage rate and what are your job responsibilities?

A. I get a salary, and that salary is, oh, about \$30,000 a year. The hours vary, you know, because in the spring with the planting it takes a lot more time, and, of course, in the fall with the harvesting it takes a lot more time. So during those times of the year, I'm out, oh, 6 a.m. until dinner, then go to our farm and work until dark. Then in the wintertime and summer months, those hours they're a lot more reasonable, they're sort of regular hours, 40, 45 hours, whatever. I don't get no overtime, and I've gotta supervise, you know, the workers and make sure they're doing the stuff right and make sure the equipment is working okay and checking the crops, make sure they're getting fertilized and pesticided and all that good stuff, you know, like they're supposed to.

Q. What types of benefits does Consolidated Farming provide you? By that, I am inquiring about whether they give you vacation time and holiday time, provide you with any health care coverage or a retirement program?

A. Oh yeah, Consolidated, they, they've got good benefits. I get health coverage, you know, it's one of those good plans with a company, think it's Anthem Blue Cross/Blue Shield. Best I recollect, they pay for most, most everything. I usually have to pay some portion, but then they cover all the other stuff. My employer pays for the cost of that; I don't have to contribute anything except when I use the plan, and then I usually have some expenses with it. I also get two weeks' vacation. Naturally, I have to take it during the slow seasons, but that's no problem, and I usually get holidays excepting those that are during, you know, planting and harvesting season, and then there's just too much work to do.

Q. What about a retirement plan; does Consolidated Farming offer a retirement plan for you?

A. Yeah, they got a plan. I don't know the exact details of it or anything, but it's okay. You best talk to them about just how it works.

- Q. **Has Consolidated Farming gone through any changes in personnel lately?**
- A. Well, around the time of my accident, they had just started to reorganize the company, and a lot of people were being shifted around and some people were being let go. I don't think I would have lost my job, though.
- Q. **Now, I understand that you have not been able to return to work since this accident. Have you been receiving any benefits or money from the company while you have been away from the job?**
- A. Yeah, they give me some disability benefits, short-term disability benefits. A couple hundred dollars a week to my recollection. But I don't think that's gonna last too much longer. The company told me I was either gonna have to go back to work or I was gonna lose my job soon. I don't have much more time to decide.
- Q. **You also indicated, Mr. Wilson, that you had this farm, 53 acres of farming. Do you farm this land and work for Consolidated, or how do you handle this farm of yours?**
- A. Well, you know, I been working this farm for 30 years. It's not too big, and so I can sort of squeeze it in after my work hours. Naturally, during the heavy seasons in the spring and the fall, I have extra help, but I also got George, you know, and he helps me, so we've been able to handle it all these years.
- Q. **So, since this accident, have you been able to manage the farm or are you having problems with the farm?**
- A. Well, you know, there's always problems, and I don't do so well, but I, I'm getting better at it, and so I'm expecting to maybe keep it up.
- Q. **When did the accident happen?**
- A. On August 4th, a Friday, about noon.
- Q. **Where did it happen?**
- A. Right behind my house, about 50 yards from the house, near the barn out in the open area. There are a few trees in between where we were standing and the house. It was a clear day; otherwise I wouldn't of been spraying.
- Q. **Please, in your own words, describe the accident.**
- A. Okay, I was standing on the ground right behind the pickup truck; the tailgate was down (indicating). On the tailgate was a case of oil, just a pasteboard box of oil cans. I put the Dinitro on top of the oil cans and I was pouring from the five-gallon container of Dinitro herbicide into a one gallon pail I bought with the Dinitro from Roe's Outlet Store, here in Franklin.
- Q. **What happened next?**
- A. Well, in order to do this, the way the can is made, you have to pull a spout off — flexible spout out of the top of the can, and it just more or less pops out — and you screw off the cap. And then to avoid spilling it, the way I've gotten accustomed to doing it is actually putting the pail up to the spout of the five-gallon can as I tip it over. It's more or less this high to me (indicating), about chest height. And as I was tipping the can over - it was full, it was a brand-new can - it slipped on top of the box of oil, and I didn't lose hold of it (indicating), but it fell down under the tailgate on the bed of the truck, and the Dinitro splashed out onto me on the left side of my neck (indicating) and my front (indicating) and my legs (indicating) and a little bit on my cheek (indicating).

- Q. **You were holding the five-gallon bucket close to your body?**
- A. I was holding it the way I've always held it. I was standing, as I said, at the tailgate of the truck. Just reached up and was tipping it over the pail, as I've done many times before.
- Q. **How many times?**
- A. Oh, about 200 to 300 times, with all types of weed-killers, not just Dinitro. They come in the same kind of container.
- Q. **What were you wearing?**
- A. Jeans, a long-sleeve work shirt, and boots.
- Q. **Were you wearing work gloves?**
- A. Nope.
- Q. **Why not?**
- A. I have gloves, but I wasn't wearing them - they get in the way, they make it tougher to handle the spout and such.
- Q. **You know weed-killers are dangerously toxic, don't you?**
- A. Yes sir. Otherwise they wouldn't work.
- Q. **Have you ever spilled any chemical on you using this method?**
- A. No, never, though I've come awful close.
- Q. **Mr. Wilson, if you've come close before, and you know chemicals are dangerous, why did you continue to use this method?**
- A. The way I do it is the safest way possible. Every farmer I know does it that way. How was I to know I'd get hurt like this if this weed-killer spilled on me? There are no directions on how to pour it on the label. Anyway, because of my injuries, no one I know uses Dinitro anymore. They even stopped selling it in their outlet store now.
- Q. **Did the Roe Outlet provide you with any pamphlets or literature on the products?**
- A. No sir, but they told me that Dinitro would be safe and would work if I followed the directions. They never told me about those tests which killed those animals. All I got was the five-gallon container and the label.
- Q. **How did you first decide on Dinitro as a product to be used on your soybeans?**
- A. Well, I thought it would be effective as a herbicide. It worked well as a direct spray underneath the rows at this time of year, and I used it - I think it was the year before. I'm not sure. It was at least one of the years before, I had used Dinitro. It's not the only effective herbicide, but it's the cheapest. And it's made by Roe, who hires a lot of people here in Franklin. They had a good reputation before my accident. The same thing happened to Doug Jones last year, but with a different weed-killer. He had to sue and settled for half a million. My lawyer represented him too.
- Q. **After you bought the product, did you read the instructions on the label?**
- A. Well, I read through them. The label is on the back of the container, but it's real easy to read. I always try to read such instructions. I can't say that I remembered every word of it, but I looked at it, and I noticed the warning. Of course I know pesticides are dangerous if you get them in your mouth and such.
- Q. **And rather than pouring the Dinitro directly into the machine, you poured it into the one-gallon pail, which you then used to pour the Dinitro into the machine?**

A. Yes, sir. But I did that to measure it. If you don't measure it right, you're either putting out too much and wasting it, or you're not putting out enough and it don't work.

Q. When you read the label on the container of Dinitro, did you notice the large skull and crossbones on the label?

A. Well, to be honest, I don't really remember it. I — you know, these labels all say the same thing. They're just a bunch of words the government and lawyers make the company put on there to cover their asses, if you'll excuse my French. And I've seen those skull and crossbones before, and I know what they mean — be careful, don't swallow, things like that. I handle all herbicides carefully, I don't need a label to tell me to do that.

Q. Did you notice the word DANGER in large letters?

A. Yes, sir.

Q. Did you notice the word POISON in large letters?

A. I'm sure I did. I know that it's dangerous and poisonous, but when I read "poisonous," I thought it meant don't swallow the stuff, like I needed them to tell me that. I don't know anything about what do you guys call it — absorption? I saw that word used but didn't know that absorption meant if you got it on your clothes or your skin for a second it would cause all the problems that I now have. Do you think I would have used it if I'd known? I followed the instructions, washed, and thought that would help. Otherwise, why put in medical instructions? And it says "Fatal If Swallowed," not "Fatal If It Gets on Your Skin." It killed all of those animals in the tests, and it damn near killed me. They should have put something about those dead animals on the label if they wanted to warn people — that would have gotten my attention and made me more careful when handling the stuff.

Q. And you didn't pay that much attention then to the danger warnings?

A. No. I feel like that once you've read one of those labels, you've read them all.

Q. What was your immediate physical reaction when you spilled the chemical on yourself?

A. Well, I was surprised, and I was worried, I guess you could say, that it was going to hurt me. So I immediately washed it off. I remember cursing, but that's all.

Q. Did the chemicals burn or sting you?

A. Not right at that time, no, sir.

Q. Did you feel giddy, weak, or nauseous?

A. No, sir, not at that time.

Q. Did you breathe any of the fumes?

A. Well, I breathe them all the time when I'm pouring weed-killers like Dinitro. I couldn't help but breathe them.

Q. No, I meant to ask, did you breathe them while the Dinitro was on your clothes?

A. Well sir, I was breathing the whole time so if that stuff gives off fumes, then I guess you'd have to say I was breathing them.

Q. What did you do then?

A. I washed off at the faucet.

Q. **Did you follow the directions given on the product label?**

A. Well, to tell you the truth, all I needed to do was what I did, was to go wash it off. I washed it off outside, and then I went inside with Debbie and washed off four or five times with soap and water in the tub. The instructions, I remember, were to just wash it off, and that's what I did.

Q. **And you did remove the clothing that you had been wearing?**

A. Oh, yes, sir. I took them right off and Debbie burned them. She was real insistent about that.

Q. **Why?**

A. I don't know. She's real paranoid about chemicals, even though she knows farmers couldn't get along without herbicides and insecticides. I keep on telling her what used to say on TV, "without chemicals there would be no life itself," or something like that.

Q. **Were there any witnesses?**

A. Yes, Debbie was in the kitchen, and George was right there helping me out like always. He's a good kid. He's had a rough time since his mother and me split up and she moved away. He's had a few problems with pot and the local cops. He lives over the barn because he likes his privacy. I know he and Debbie sometimes don't get along but most often we are one big happy family. He's been real good since my accident, helping out, driving me around. He wants to take over the farm some day – says he has plans for some new crops to plant. He's always got new ideas and plans that boy.

Q. **When did you go to the doctor?**

A. About three weeks later, after I kept getting weaker and weaker and started to fall a lot. Debbie made me go to Dr. Weeks, our family doctor, around the last week in August.

Q. **What did he tell you?**

A. He said my arthritis was acting up, gave me some aspirin, and told me to rest. But it didn't help. I never felt that way before, even when my arthritis was at its worst, during winter. It was like my feet were weighted down, and I had little balance.

Q. **Who did you go see then?**

A. Dr. Jason, right after Labor Day. He put me in the hospital for 19 days of hell. I never had been prodded or tested like that – not even when I was in the army. I also saw Dr. Donald. I don't like him. I had to see him because of this lawsuit. He put me in the hospital for a few more tests. He just about stuck me to death with more needles.

Q. **In the last ten years, what other physical problems have you had?**

A. Oh, about YR-11 I had pneumonia, a couple of years before that I had a minor heart attack. I was in the hospital because of my heart for two weeks. My daddy died of heart trouble when he was 59. In about YR-14 I had to go to the Campbell Clinic for rheumatoid arthritis. I still have a little problem with my arthritis. I just put up with the pain. Before that I hadn't had any problems since I was in the service.

Q. **When were you in the service?**

A. I served in Desert Storm. I don't recall the years.

Q. **Where did you serve?**

A. I was in Kuwait near the Iraq border..

Q. What kinds of health problems did you have in the service?

A. Well, a lot of soldiers in my outfit complained of Gulf War Syndrome but I never thought much about it..

Q. Are you presently on any medication?

A. Yes, but I'm real bad about remembering to take them.

Q. Do you have any allergies?

A. No, sir, none that I know about.

Q. Before this accident, what other types of pesticides or weed-killers did you use?

A. I used Treflan, a premerge herbicide you mix in the soil before planting; MSMA, a contact herbicide you apply after the weeds start to grow; Cotoran; Ansar 529; Carmex DL; and some others I can't remember just now. I have used all types to grow my crops.

Q. How long have you used these types of chemicals?

A. Near to 20 years. Dinitro only for a year. They're all real effective.

Q. Have you ever spilled or breathed these chemicals?

A. Breathed, yes, because you can't help that. I don't think I've spilled any, not that I can remember. Maybe on my hands, but that's all.

Q. How have you been keeping the farm going?

A. I haven't. George helps, but I've lost close to \$15,000 worth of crops because of the drought. If I had been able, I could have prevented it. Debbie's too busy with her job to help out even if she could. She works at Sam's in Franklin. I hate her working there, but we do need the money. She brings home good tips. She's had to stop going to school too, she was going to be a CPA.

Q. I know what your Complaint says, but at any time, Mr. Wilson, did you or have you experienced the following symptoms: excessive sweating?

A. Sure, at times I've sweated a lot.

Q. Excessive thirst?

A. Well, what do you mean by excessive – I've always drunk a lot of water – but not anymore or less since the accident.

Q. Fever?

A. George told me he thought I had gotten a fever after the spill but I never checked.

Q. Excessive fatigue?

A. Well, not excessive. Pretty extreme though. I've been tired; I can't walk because of my muscles.

Q. How much Dinitro spilled on you?

A. About a gallon, I figure. More than half of that liquid was that horrible chemical, assuming they're telling the truth on that label.

Q. Mr. Wilson, were any tests performed on your limbs or extremities for signs of numbness, weakness, cramping, and nervous response at the hospital?

A. Yes. They ran every kind of test on me that I could imagine. And they took muscle tissue out of my leg and a million blood tests. They were all real painful. It was 19 days of hell.

Q. What did the test show as to the numbness, weakness, cramping, or nervous responses in your limbs or extremities?

A. Well, finally they figured out that the Dinitro caused it all. I didn't really believe it, but they showed me those blood tests. They even say I had a near-lethal dose. They say I'm lucky to be

alive, but as bad as I'm feeling, I wish I was dead. I can't work, can't even make love to my wife. I feel useless, like a 90 year-old man.

Q. Can you basically tell me what other physical problems you've had? How would you describe your medical problems, other than a general weakness?

A. Well, I have a problem with night vision. If I'm riding in a car at night, I have trouble picking up the oncoming headlights in the distance. And in the daytime, I have a hard time seeing far away. I used to have excellent vision as far as distances go – day or night. I also don't hear as good and have headaches. I have a problem holding my water, if you know what I mean. I have to get up three or four times a night, and I've never done that before. My knees have numbness in them, which is a real nuisance. And right now, I'm sitting here, and I feel like I have to get up and go. I have a nervous tension build-up problem. My wife and I have a problem in that I'm impotent and that we can't have sex, which is a strain. And I lost about 25 pounds. I've gained back 10 of it, but it's all flab. But my main problems are that I'm weak, nervous, and I have real bad headaches. Oh, let me add one more thing. Right after the spraying, I had a problem with hemorrhages in my bowel movements, which was very painful and scary. I had to go to the emergency room because of my bowels. That was two months after the accident. And while the hemorrhages have gone away, I still have a real problem with diarrhea and things like that.

Q. You mentioned impotency. Just what exactly is the problem?

A. How much do you want to know? I can only get half an erection. I've had a few problems before, like all men. Debbie and I had a satisfying relationship, about two to three times a week. I don't feel like I'm much of a man anymore. I'm scared she will leave me for some young man.

Q. How much were your total medical bills?

A. About \$15,000, but that's just my best guess.

Q. What was your annual income before the accident?

A. After expenses, I cleared \$13,000 from the farm each year and I had my regular job that paid about \$30,000 a year plus benefits. Since the accident, the farm's been losing money. I don't know how much. I can't farm, I can't work at the company, and I can't even fix farm equipment like I used to each winter and make some extra money.

Q. How has your wife taken all of this?

A. How do you think she's taken it? She's worrying herself to death. I snap at her all of the time. She's doing good just to be putting up with me. She's had to go back to work, which I don't like. And she had to give up her college courses. Our marriage isn't like it

used to be. She's young and wants to go out and do things but this disease makes me too tired.

Q. If you feel that you've been misled in using an unsafe product, what gave rise to your misconception of the danger of this product?

A. Would you mind putting that in English?

Q. Sure, I'm sorry. If, as you claim, Roe misled you about the safety of Dinitro, what do you say caused you to misunderstand the danger of using it?

A. That's better. Well, I guess that's why we're here, because the label wasn't clear and the weed-killer was far more dangerous than I thought it was, evidently, since I've got these problems.

Q. How do you feel now; what can you do?

A. I feel a little better. I can oversee the farm by truck. I can get up from a chair without too much difficulty, and I feel a little strength returning in my arms. But I'm no way anywhere near what I used to be. They tell me it's permanent. I'm scared about what more is going to happen to me. I learned after getting sick that Roe knew that Dinitro also caused some lab animals to get cancer. I'm always thinking about that now.

EXCERPTS FROM DEPOSITION OF DR. WILLIAM JASON
(Taken on October 2, YR-4)

Q. Would you state your name, Doctor?

A. William Lawrence Jason.

Q. What is your address, sir?

A. 10 South Boulevard, Franklin, Roosevelt.

Q. And what is your occupation or profession?

A. I am a medical doctor specializing in neurology.

Q. Doctor, would you outline for the jury your educational background?

A. I received my B.S. from the University of Maryland and graduated from the University of Tennessee Medical School in Memphis. I did my internship and residency at the University of Tennessee Medical Center and my fellowship in neurology at Roosevelt Memorial Hospital. I've been in private practice here in Franklin since YR-39.

Q. Are you a member of any of the medical societies?

A. American Medical Association, the Mid-South and Farrah County Medical Societies, the American Neurological Academy, and several others. In fact, I belong to all of them that are appropriate for this part of the country. I belong to the American Institute of Hypnosis. That's an ANA Division of the American Medical Association, and I belong to the National Institute of Acupuncture Research.

Q. Doctor, are you on the staffs of any hospitals?

A. Yes, I am.

Q. Would you name those, please?

A. I have privileges at Roosevelt Memorial Hospital here in Franklin, Methodist Hospital here in Franklin. I am a member of the University of Roosevelt teaching staff as an assistant professor.

Q. What do you teach?

A. Neurology.

Q. Can you explain what neurology is?

A. Neurology is the specialty of diagnosing and treating diseases of the central nervous system, as well as the peripheral nerves and muscles.

Q. And is neurology a recognized specialty by the American Medical Association?

A. Certainly.

Q. Doctor, are you board certified in neurology?

A. I am board eligible.

- Q. **Doctor, in pursuing your specialty of neurology, have you published any papers on that subject?**
- A. Yes, several—in drug research, some chemical exposure and things like this.
- Q. **Did you have occasion to examine David Wilson?**
- A. Yes, for the first time on September 1, YR-5. He was referred to me from Dr. Weeks, a general practitioner. Dr. Weeks gave me a complete history and described the accident as told to him by Mr. Wilson.
- Q. **What records of his treatment have you reviewed in connection with your treatment of Mr. Wilson and your formulation of opinions for this case?**
- A. I've been provided with some of his records and some letters in my files from the chemical company. I've also had some copies of letters sent to me since I started treating David. The actual diagnosis was made at the Roosevelt Hospital through blood analysis. It was then sent to the chemical company that manufactured the herbicide. We also did a muscle biopsy and several nerve conduction tests. We had an EMG done, an electrical investigation of muscle potentials and also nerve conductions. This was done by Dr. Richard Gerd, who is an associate of mine.
- Q. **What was the result of that test?**
- A. It was abnormal. The findings were consistent with peripheral neuropathy and myopathy. He had a myopathic picture on the EMG.
- Q. **What does that mean?**
- A. It means that the muscle potentials are pathological in showing high bursts in extended movement, electrical patterns.
- Q. **What does that mean as far as Mr. Wilson's function?**
- A. In saying myopathic, that means that the muscles have pathology, that it is an abnormal muscle.
- Q. **Did the test indicate a muscle weakness?**
- A. Muscle damage.
- Q. **Was that damage limited to his extremities or was it generalized in Mr. Wilson's body?**
- A. It was generalized but more so to his extremities.
- Q. **Doctor, was it brought to your attention at the time you saw Mr. Wilson that he had been exposed to the chemical 2-sec butyl 4,6-dinitrophenol which is sold as Dinitro?**
- A. Yes. He told me in detail about the accident. After my initial examination, we did the tests and got all of the reports and the muscle biopsy report and the chemical report from the Duckworth Pathology Lab. They confirmed that Dinitro was in his bloodstream. I talked to the physician at the Roe Chemical Company who sent me their findings. The levels found in his blood were around 5 micrograms per milliliter, and that was a rather dangerous level, if not lethal.

Q. Have you familiarized yourself with the ways that Dinitro may be introduced into the human body?

A. Yes, either orally or by contact with the body - absorption into the bloodstream through contact with the skin, airborne or swallowing it. I've read the medical literature regarding this Dinitro chemical. There are a few case reports of people with peripheral neuropathy that were exposed to chemicals with very similar chemical structures. The patients had symptoms very similar to Mr. Wilson's. There are no large well-controlled studies in the literature of Dinitro or the other chemicals that have similar structures. Some of my colleagues have told me that they have treated farmers who have used Dinitro and other herbicides and pesticides and who developed neuropathies.

Q. What does lethal mean?

A. A dose level that would kill you.

Q. Kill an ordinary person?

A. Yes. I am not saying that Mr. Wilson is not an ordinary person. You said, "kill an ordinary person." I am not saying he is an abnormal person. I do not know why it didn't kill him.

Q. Doctor, do your records indicate when you last saw Mr. Wilson?

A. Yes. I see him about every three or four months now. I saw him two days ago. He still had paresis, of course, easy fatigability, multiple complaints, of course, of pain here and there. But this is just from his inability to sit down and take it easy. He moves around a lot, he's very tense. He, of course, has chest pains and things like that due to muscle contractions and not cardiac disease by any means. He has difficulty with erections, the inability to get an erect penis. As a matter of fact, I first thought the cause was his difficulty with bladder function. When I first met with both Mr. and Mrs. Wilson, she brought it out quite emphatically that she had noticed a change prior to when he went in the hospital - in fact, back several days after he had this chemical exposure, and since that time I don't think he has had an erection. At one time, he was quite a muscular man from descriptions that have been given me, and he is not now, and it is hard to assess just how much of a percentage of paresis he has. I started to give you one, but it would be difficult to do. He certainly is weak enough that he fatigues easily, that his gait, ability to walk any distance, would be shortened. He is somewhere, I suppose, around 40% to 50% weaker than he was prior from the descriptions I could get. It would be hard to say just how much, and only speculation on my part. But at the present time he fatigues very easily.

Q. Has there been any damage to Mr. Wilson's kidneys or liver?

A. Well, during the time I have been seeing him, the only time I saw him with reference to liver function was during the hospital stay, and he definitely had damage there. Of course, this is to be expected. It is quite apparent from reading the animal studies that have been published on Dinitro.

Q. In what respect? The result of the Dinitro?

A. Yes.

Q. Doctor, do you have an opinion to a reasonable medical certainty, based upon your education, training, experience, review of relevant literature, and treatment and

examination of Mr. Wilson, as to whether Mr. Wilson's contact with the Dinitro directly caused the injuries you have described to us?

A. Yes. It is my medical opinion, based on my tests and Mr. Wilson's prior medical history, that the cause of the pathology was related to the absorption of the chemicals through his skin. It was found to be in his blood. His contact with the chemical caused everything - impotency, etc. He has peripheral neuropathy with myopathy. He will not have any significant improvement in the future, though he will live out a normal life expectancy unless he develops liver cancer resulting from his exposure. I doubt whether he can have sexual intercourse again.

Q. Do you have an opinion as to whether or not Mr. Wilson is permanently and totally disabled from performing the duties of a farmer?

A. Yes. He tries to do jobs that he had been doing around the farm, and he cannot. I have no idea of his educational background, what he can do on the labor market. He certainly can't go back to farming like he was doing. He is certainly not disabled to the point that he couldn't do a sedentary job, like selling postage stamps or something of that sort, handling mail. He cannot go back and farm like he was doing. I am sure that's permanent. It is my opinion his exposure to this chemical caused his neuropathy and his myopathy. I also believe it substantially increased the odds that he may develop liver cancer later in life.

Q. This one exposure?

A. Yes. There is no threshold known or accepted for carcinogens. This man had worked with this material before, and it is probable that he absorbed some of this material before either through his skin or inhalation. He gave no history of ever being sick before this very, very large exposure, so I would think it is reasonable to conclude that this one large exposure caused the condition.

Q. Is it possible that muscle weakness from a chemical could occur because of repeated exposure to a chemical?

A. Yes, it is possible.

Q. And were you aware of his exposure to any other chemical outside of Dinitro, say, over a period of a year or two?

A. No.

Q. Are you aware of any other significant chemical exposures before YR-6?

A. None that he reported.

Q. Are you aware of any other significant illnesses in Mr. Wilson's past?

A. He didn't report any to me and neither has Dr. Weeks.

Q. Let me ask you, assume someone's blood level was 4.3 micrograms per milliliter one month after an alleged exposure. Would you tell me whether that would mean that more than that amount of had been previously present?

A. It probably would. Chemicals are metabolized either by the liver or kidney. Dinitro is primarily broken down by the liver over a period of time, and so I would assume such a person would have had a higher level one month before the blood was tested.

Q. Now, assume that Mr. Wilson had exposure, as he told you, to his arms, chest, and those areas that you designated in your report, and he immediately washed off and then took a bath with soap and water and never again wore the clothing that he had on, shoes, nor any portions of his apparel. Would you assume that such a dosage after being washed off could within that period or time be absorbed through the skin?

A. It is absorbed rapidly through the skin, that's clear from all of the literature. If he were heavily exposed, a significant and potentially lethal amount could be absorbed in a few minutes. I performed a differential diagnosis and was able to rule out all other possible explanations for his symptoms, leaving his Dinitro exposure as the only explanation for his problems.

Q. Are there any peer-reviewed studies of an association between Dinitro and peripheral neuropathy and myopathy?

A. Not in the literature but some of my colleagues have told me about several patients who have been exposed to Dinitro and have developed neurological problems. The Roe Company has a horrible reputation for making killer chemicals. I personally have not treated other victims of Dinitro, but I have had to treat victims of other types of herbicides made by Roe. One man died as a result of absorption through the bloodstream because he spilled another type of Roe weed-killer on himself that I understand had a molecular structure similar to Dinitro.

Q. I believe it is on the record that Mr. Wilson used Treflan, that he used Cotoran, Ansar 529 MSMA, MSMA, Cotoran plus MSMA, Carmex DL, which is a contact killer, and Riverside 612.

A. Yes, and that's a lot of chemicals.

Q. Given the fact that Mr. Wilson used all these chemicals over a twenty-year period or so, would your opinion be any different as to the cause and effect of his problems?

A. Well, if the chemicals you mentioned had chemical structures similar to Dinitro then it is possible that they may have contributed to his problem but this recent large exposure to Dinitro overwhelmed his defense clearance mechanism. This caused him to suffer his injuries. The literature documents how long these chemicals stay in the serum.

Q. If he had been exposed to all the chemicals we just discussed over a number of years, isn't it possible that those exposures may have caused his alleged problems?

A. I said before if they had similar structures it's possible. It is more likely that long-term exposures to such chemicals put him at greater risk for developing liver cancer and the recent massive exposure caused his neuropathy and myopathy. It just makes common sense that because the neuropathy and myopathy occurred so soon after the exposure, that the Dinitro caused the problems. Plus, we know Mr. Wilson had high levels of Dinitro in his bloodstream.

Q. Doctor, aren't there case reports in the peer reviewed literature that describes many of the same symptoms Mr. Wilson allegedly developed in servicemen suffering from Gulf War Syndrome?

A. Mr. Wilson didn't "allegedly" develop symptoms. He has them and he has a well-defined medical condition called peripheral neuropathy and myopathy. This is not something he made up. Yes, case reports of the type you describe are published in the literature. The temporality of his recent exposure and the later development of symptoms

plus the animal data Roe generated make it clear to me the cause of Mr. Wilson's problems was Dinitro poisoning and not some "alleged" form of Gulf War syndrome.

Q. By the way doctor, how much are you paid for your services as an expert witness in this case?

A. My standard fee is \$350 per hour, with a 4-hour minimum for depositions and court appearances.

Q. How much do you charge for your regular examinations of Mr. Wilson?

A. Well his insurance company's reimbursement rate is \$45 for a half hour visit.

EXCERPTS FROM DEPOSITION OF DR. MARTIN DONALD

(Taken on November 19, YR-4)

Q. Would you state your name, please?

A. Martin W. Donald.

Q. And you are a physician with an office in Franklin?

A. Yes.

Q. Dr. Donald, what is your specialty?

A. Internal medicine.

Q. And you are Board Certified in internal medicine?

A. Yes.

Q. Are you Board Certified in neurology?

A. No, but at the time I took my Board in internal medicine, neurology was really considered part of internal medicine. So I have training in organic neurology as part of internal medicine.

Q. Did you examine David Wilson?

A. Yes, at the request of Roe Chemical Company. I know their medical director. I saw Mr. Wilson in the hospital for my personal examination. I had access to all of his records and past history. Apparently he's seen more than one doctor, besides Dr. Jason. Mr. Wilson told me his version of the accident, his spilling the pesticide on him, the symptoms, etc. Apparently Dr. Jason made the diagnosis after getting the results of blood tests from the chemical company. I did a complete physical examination. His deep reflexes were equal and active. The superficial reflexes were present. Sensation is apparently intact. Babinski signs are negative. The patient swayed with the Romberg test, but does not fall.

Q. Of what significance is the fact that he swayed with the Romberg but didn't fall?

A. Well, that means that his swaying is probably more a result of muscle weakness than it is of central nervous system disease.

Q. What other tests did you perform?

A. X-rays, blood chemistry tests, liver scan. They were all negative. He refused to take an electromyograph or submit to another biopsy, so I had to rely on his previous tests, which, in my opinion, were done incorrectly.

Q. Would you tell me what an electromyogram is, and what it is designed to ascertain?

A. Well, they stimulate the muscles electrically and see how they respond to a standard electrical current. It is designed to show how the muscle functions. An electromyogram is a test for the diagnosis of myopathy. His past test results were very, in my opinion, inconclusive. They seemed to indicate myopathy, but not to a medical probability.

Q. Would you tell me what objective findings you made, if any, that showed that Mr. Wilson, when you had him in the hospital at that time, was suffering from muscle weakness, if he was?

A. He swayed with the Romberg test.

Q. Is that a symptom of muscle weakness alone or can that be a symptom of other things?

A. It can be a symptom of many other things, too numerous to list also. There are many things which might cause swaying on the Romberg test.

Q. In other words, the fact that one swayed on the Romberg does not necessarily indicate muscle weakness, would it?

A. No, not necessarily.

Q. It could?

A. Sure.

Q. Anything else that you found?

A. The other thing was that he was clumsy in his movements in walking and his gait.

Q. Would you describe that a little more in detail? You say he was clumsy in his movements. You mean in walking?

A. Yes, but he is a 51-year-old man, a farmer at that.

Q. Anything else that you found objectively that would indicate to you that he was suffering from a muscle weakness?

A. His muscles generally were flabby. He was soft. He was not very muscular for a farmer. In my opinion he does have neuropathy but not myopathy. He has arthritis and heart problems. He's not a young man. He's been around toxic chemicals all of his life, and apparently is not very careful with them.

Q. Now, of course, you did review hospital records and a history of other records and what he told you of his exposure?

A. Yes.

Q. Now how would you describe the present muscle weakness you found?

A. I would describe it as moderate. This man is like a weak individual who was just in very poor physical condition but able to be up and around.

Q. All right. Do you think his condition will improve over time?

A. It should.

Q. Why?

A. All he needs to do is exercise. Even assuming he had a toxic reaction to Dinitro, which I do not believe, the chemical is out of his body.

Q. He indicated that he was impotent but I believe your report said he told you he had engaged in intercourse but it was not satisfactory. I think you used that word.

A. Yes, he told me he had intercourse but that he would lose his erection after a few minutes. He said it had happened before in his life, but now it happened every time.

Q. Is it because of the flabbiness of his muscles?

A. I doubt that. There are many causes for impotence, but initially this may have been organic from the effect of the nerve endings. I also think it is primarily psychological.

Q. **Well, at the present time, based upon your examination, would you think that his present condition would prevent intercourse?**

A. Probably not. He does have pretty good bowel and urinary function.

Q. **We have talked about, and you mentioned in your testimony, the amount of chemical, and I am looking through the hospital records again and I see a report from the Duckworth Pathology Group dated September 18, YR-5 signed by Dr. Duckworth, and in that report he mentions the serum level. And in there he indicates that since Mr. Wilson's exposure to the compound occurred approximately one month before, the serum level of 4.3 micrograms per milliliter was good presumptive evidence of previous toxic levels in his blood. Would you agree with that statement?**

A. The fact that Dinitro was in his blood one month after the accident may suggest that it was in his blood at the time of the accident. The fact that the chemical was in the blood does not mean it had a toxic effect and caused neuropathy.

Q. **Do you believe the exposure caused his problems?**

A. No, I don't think so. There are no published reports of people developing the type of problems Mr. Wilson says he has from exposure to Dinitro. Assuming the results seen in the animal studies are applicable to humans, he would have needed to have been exposed over a prolonged period of time and to much higher doses. He denies this occurred. The tests indicate a significant level in his bloodstream. This suggests he spilled it on himself and walked around with the chemical on his skin. You will have to ask him about that. I think his symptoms are consistent with the complaints of veterans who suffer from Gulf War Syndrome.. Dr. Jason did not appear to include that in his differential diagnosis.

Q. **Have you looked over the literature on this chemical compound?**

A. Yes, and it supports my belief that this man does not have neuropathy or myopathy caused by acute exposure to Dinitro. The case reports that Dr. Jason mentioned in his deposition relate to other chemicals that may have similar structures but are not Dinitro. Plus, no large epidemiological studies have been done on people exposed to these chemicals. The data Dr. Jason relies upon is not the type of data from which sound scientific conclusions about general causation can be drawn. The animal data cannot be extrapolated to humans.

Martin Donald

EXCERPTS FROM DEPOSITION OF DR. D. B. TOWE

(Taken on December 20, YR-4)

Q. **Dr. Towe, would you state your full name, please?**

A. Dr. Daniel Baker Towe.

Q. **Who is your employer?**

A. Roe Chemical, working in the Toxicology Department, for five years.

Q. **Would you give us a little bit of your educational background?**

A. Four years of undergraduate study in the field of biology. Four years of graduate study in toxicology.

Q. **Do you have a doctorate in toxicology?**

A. Ph.D.

Q. **In your employment with the toxicology department with Roe Chemical, what is your main job?**

A. I'm head of the department.

Q. **Just what do you do?**

A. I run experiments on design chemicals and recommend what should be put on labels.

Q. **Are you familiar with the product Pre-merge Dinitro?**

A. Yes, through the experiments which I conducted at the labs here at Roe. We ran a series of several tests on different compounds for alkyl dinitro phenols. We ran a series of tests on three different lab animals, including rats, mice, and rabbits. We then published those results in an article I co-authored.

Q. **What was the purpose of the tests?**

A. The purpose of the test was to find out the toxic effects in relation to how it would affect man — or how it would affect these animals, and to help write the warning labels.

Q. **What different compounds did you test?**

A. The different compounds of dinitrophenol that are structurally similar. We experimented with five of the chemicals: 2,4- dinitrophenol; 4, 6-dinitro-o-cresol; 2-sec butyl 4,6-dinitrophenol; 2-cyclohexyl 4,6-dinitrophenol; 2-cyclohexyl 4,6-dinitrophenol compound with dicyclohexylamine.

Q. **Would you go into a little more detail on the tests that you performed and give us the results of some of the tests on the different lab animals?**

A. The first experiment we did was on rabbits. Each chemical was tested on 20 rabbits. We exposed four groups of 5 rabbits to a different concentration. We also had 5 controls that were dosed with saline. We found no statistically significant differences between the exposed rabbits and the control rabbits. This suggested that skin exposure to Dinitro would not produce harmful effects in humans.

Q. **Were there any differences regardless of whether they were statistically significant?**

A. Rabbits in three of the test groups exhibited symptoms consistent with a fever.

Q. **Were any of those chemicals that produced this result 2-sec butyl 4,6-dinitrophenol?**

A. Yes.

Q. **What was the concentration of the Dinitro that produced the symptoms?**

A. The rabbits reacted only to the highest concentration. The highest concentration was undiluted Dinitro.

Q. **Was there any reason for using rabbits?**

A. Yes. An animal is selected on the basis of its similar physiological comparative anatomy to man, and that's why we chose rabbits.

Q. **There were two other lab animals that you mentioned, laboratory rats and mice, correct?**

A. Yes.

Q. **Would you explain the testing on those animals and the results?**

A. The skin absorption testing on the rats was done in the same manner as the rabbits. We also did two other experiments to determine the effects from ingestion. We created 5 groups of 20 rats. Each group was fed one of the 5 chemicals we tested. Four rats in each group of 20 were fed a single dose of varying concentration. We also had 5 controls. The other experiment involved oral daily dosing 100 rats over a six-month period with each of 5 groups being fed one of the chemicals.

Q. **Was 2-sec butyl 4,6-dinitrophenol tested for six months?**

A. Yes.

Q. **What results did you get in your single dose experiment?**

A. Some of the rats getting the highest dose developed high fevers. We found this reaction in response to three of the chemicals. One rat out of the 100 that we tested in the single dose experiment died at the highest dose.

Q. **What chemical was fed to the rat that died?**

A. The chemical was fed to the rats in their water and mixed with their food. The total daily amount fed to the rats was equal to .01%, .10%, 1% or 5% of their body weight. The average weight of the rats was 400 grams.

- Q. **What results did you find in the chronic testing?**
- A. Some rats at the two highest doses developed what appeared to be neurological deficits. However, the frequency of this result was only marginally statistically significant.
- Q. **Based upon the tests and the results, did you conclude that any of the compounds had any toxic effect in the rats?**
- A. Yes. The skin testing produced some pyretic effects. The one death from the single oral dose was not a statistically significant result. Only 6 rats died in the chronic testing.
- Q. **And what caused the pyretic effect that you mentioned?**
- A. The mechanism that caused the pyretic effect is not understood completely.
- Q. **Which chemicals produced the reactions you've mentioned?**
- A. 2-sec butyl 4,6-dinitrophenol, 4,6-dinitro-o-cresol, and 2,4- dinitrophenol.
- Q. **So, three out of the five compounds had some toxicity, and Dinitro had a fatal effect in one rat in the single dose experiment and killed 2 rats in 3 of the 5 groups tested?**
- A. Yes.
- Q. **Are 4,6-dinitro-o-cresol and 2,4-dinitrophenol structurally similar to 2-sec butyl 4,6-dinitrophenol?**
- A. Yes.
- Q. **Describe the testing that was done on the mice.**
- A. The mice were tested in much the same way as the rats except the long-term studies ran eighteen months. That was pretty much a lifetime study for mice.
- Q. **What results did you see in the testing that was done with skin application?**
- A. The mice had slightly greater toxic reactions to the chemicals than rats and rabbits. More mice developed fevers at lower concentrations with the skin absorption than the rats. In addition, 2 of the mice died from the skin absorption study done with Dinitro (2-sec butyl 4,6-dinitrophenol).
- Q. **What results were seen in the single oral dose testing?**
- A. Five of the mice fed the two highest concentrations of Dinitro died within 7 days of being dosed.
- Q. **This means that 50% of the mice fed the two highest quantities of Dinitro died?**
- A. Yes.
- Q. **What results did you achieve with the chronic feeding study in the mice?**
- A. Among the one hundred exposed mice, we were surprised to find two that died from liver cancer. We had not seen this in the rats. Approximately 20% of the mice exposed to Dinitro became ataxic. Some of those had begun to drag their hind legs before they were sacrificed and autopsied.

- Q. **What were the findings on autopsy?**
- A. Some of the animals exhibited muscle wasting and loss of nerve axons.
- Q. **Were any of the rabbits or rats autopsied?**
- A. No.
- Q. **How much was fed to the mice that became ataxic?**
- A. Mice exhibiting this symptom had received the three highest concentrations.
- Q. **What is the average weight of the mice that were used?**
- A. Approximately thirty grams.
- Q. **Of the three compounds that you described had a toxic effect, which, in your opinion, was the most toxic?**
- A. 2-sec butyl 4,6-dinitrophenol. It proved to be the most toxic when applied both to the skin and by ingestion.
- Q. **Going back to the skin absorption studies for a moment. How long was the chemical allowed to stay on the skin of the animals?**
- A. We followed the animals for two weeks after the single application. That excludes of course the few that died within two weeks of the chemical being applied to the skin.
- Q. **What precautions were taken by the lab technicians to prevent any contact with these compounds?**
- A. The only precautions taken to handle the chemicals were extreme care, plus gloves, of course.
- Q. **You didn't handle these chemicals under a hood or in an enclosed environment?**
- A. No.
- Q. **Your chemists are trained to be safe and careful in handling dangerous chemicals, aren't they?**
- A. Yes.
- Q. **So, it was your opinion that there was no danger to the lab technicians as long as they handled the compounds with care?**
- A. Yes, and wore gloves.
- Q. **And there was no reason to worry about any type of accident, any type of spill of the compounds?**
- A. No. Even a spill of the compounds on the skin would not have caused any reaction from the body. All that needed to be done was immediate washing. That's what we put on the label.
- Q. **Did you see any reason to put directions on the label about how a person should pour or get the chemicals out of the container?**

- A. No. I was only interested in the effect of the compounds, which were safe when properly used.
- Q. **If the laboratory animals had been washed immediately after application of these compounds, would there have been any toxic effect to them?**
- A. If we had done those tests and left the chemical on for only a short period, 15 minutes, there would be no fatalities.
- Q. **So, in other words, some applications were left on for an appreciable amount of time?**
- A. Yes.
- Q. **Could you tell us when the first animal died after application of the 2-sec butyl 4,6-dinitrophenol?**
- A. Twenty-four hours after application of the 2-sec butyl 4,6-dinitrophenol, a death occurred among the mice.
- Q. **Dinitrophenols, as a group, have been in use for how long or since when?**
- A. Dinitrophenols were first used approximately 100 years ago.
- Q. **But you don't know if that is a commercial use?**
- A. It has been in commercial use over that period of time. It is used extensively in sprays for control of pests, insects, mites, et cetera.
- Q. **Is the compound 2-sec butyl 4,6-dinitrophenol included in your answer?**
- A. Yes.
- Q. **In your opinion, Dr. Towe, would contact with skin by this chemical have any harmful effects or toxic effects on a human being regardless of the concentration?**
- A. Obviously, any compound if used in heavy concentration may cause problems, but if used properly, it will not produce toxic reactions.
- Q. **What, in your opinion, is a concentration of Dinitro that will not cause a problem if spilled on skin?**
- A. We can't foresee that someone would take a bath in the stuff. We can't be blamed for that. If so, aspirin would be considered abnormally dangerous. Weed killers have to be toxic to work, period.
- Q. **And what, in your opinion, would be a safe concentration of Dinitro?**
- A. Providing that it wasn't put on the skin and held on for a prolonged period of time, I believe that a heavy concentration of the chemical would not be harmful.
- Q. **Could you narrow down approximately what a heavy concentration might be? 50 percent?**
- A. Even if a 100 percent application of this compound were applied to your skin, and was washed off within, say, 20 or 30 minutes, the effects of the chemical would most likely not be absorbed into the skin. Perhaps a little irritation, but nothing to the extent that it would be fatal. Our tests indicated what the symptoms of poisoning would be, and we

put it on the label. I have heard Mr. Wilson admit that he suffered none of those symptoms.

Q. Do you think it could have any permanent, harmful effects?

A. Nothing permanent if it was washed off in a reasonable amount of time.

Q. Did you ever do any studies on humans using Dinitro?

A. Not personally.

Q. Doesn't the mortality in the lab animals suggest Dinitro can cause serious illness or death in humans?

A. No. The animal mortality is explained by the dose given to small animals: It would take a much larger dose to yield the same effects on a human being.

Q. If a human being were ten times larger than a rabbit or rat, are you saying it would take ten times more concentration of the chemical to have the same effect?

A. Yes.

Q. In your opinion, are these chemicals toxic?

A. Yes.

Q. In your opinion, are these chemicals hazardous if used in a reasonable manner?

A. No.

Q. Would you have advocated against the marketing Dinitro if you found it to be hazardous or an ultra-hazardous chemical?

A. Yes. I've stopped Roe in the past from putting products on the market that were too toxic or dangerous. We err on the side of caution. Of course, the government also plays a role.

Q. What is Roe's procedure after tests are made?

A. We confer with other specialists in the field, our marketing department, and suggest language to adequately warn users. We carefully consult federal law, write the label, and then submit it and all tests to the government. In the case of Pre-merge Dinitro, the government approved the label and warnings. They were clear, concise, and informative. We put skull and crossbones, indicated that it could be fatal, put "absorbed through the skin," "do not get on skin," even medical instructions. We at Roe feel a double obligation to the farmer, to provide him with chemicals that will work and to properly warn him. Accidents happen, but we cannot be blamed. As a part of my job, I receive all medical reports when any of our chemicals cause any injury. Despite hundreds of thousands of applications, there are only a handful of unsubstantiated adverse reaction reports. This product has an extremely low incident rate.

DEPOSITION OF ARTHUR STEELE

(Taken on November 26, YR-4)

Q. **Please state your name.**

A. My name is Arthur Steele.

Q. **Would you tell us about your education, Mr. Steele?**

A. I have a B.S. in mechanical engineering from the University of Denver in YR-45 and an M.S. from the University of Denver in mechanical engineering in YR-34.

Q. **Do you have any professional recognition or licensing?**

A. I'm a registered professional engineer in the states of Colorado and Nebraska.

Q. **Did you have to take an examination to receive that title?**

A. Yes, that's by examination.

Q. **What is your post-graduate experience and education?**

A. I've attended numerous seminars, and I have taught several seminars.

Q. **Sir, would you tell us what your teaching experience has been, please?**

A. I was a lecturer of mechanical engineering at the University of Denver for several years, where I taught design — machine design, fluid mechanics, hydraulics — all the senior laboratory courses in mechanical engineering. I was an assistant professor at the Colorado School of Mines, where I taught engineering graphics, design, and the design of mechanical components for buildings. I was an adjunct professor at the University of Colorado, where I taught engineering of thermal dynamics.

Q. **Are you a member of any professional societies?**

A. I'm a member of the American Society of Mechanical Engineers. I have held several offices, including chairman of the local sections and regional offices. I'm a member of the Society of Engineers. I have held several offices in that society. I'm a member of the National Society of Professional Engineers.

Q. **What sort of work do you do now, Mr. Steele?**

A. I am a consultant in the areas of mechanical engineering and mechanical technology.

Q. **Have you on other occasions testified about contested matters in court?**

A. Yes, I have testified numerous times, mostly for plaintiffs.

Q. **Mr. Steele, have you reviewed any materials in preparation for forming your opinions in this case?**

A. Yes, I have.

Q. **What have you reviewed?**

A. I reviewed the deposition of David Wilson, the container label, and the advertising for the product; and I have, of course, examined the container.

Q. **Have you formed an opinion as to what caused this accident?**

A. Yes, I have.

- Q. **What is your opinion as to the cause of this accident?**
- A. A defective container and lack of proper warnings and instructions.
- Q. **Have you formed an opinion as to whether this accident was foreseeable to Roe Chemical Company?**
- A. Absolutely.
- Q. **In what way, please, sir?**
- A. The company knows that it produces a very dangerous product and that this product has to be used by farmers. It has to be extracted from the container that it's supplied in into other containers so it can be mixed and diluted before being transferred into spraying equipment. So it is very foreseeable that the product can be spilled and the company knows it. The company's advertising indicates that if the product is absorbed through the skin, it can be fatal.
- Q. **What is your understanding of how this material is to be used?**
- A. The material has to be poured into some type of container for measuring into a mixing container.
- Q. **In what way do you contend that a hazard is created?**
- A. May I demonstrate with these containers? This container is empty by the way; if it was full, it would weigh more.
- Q. **How much would it weigh?**
- A. About 50 pounds. It would be difficult to lift.
- Q. **You were going to demonstrate?**
- A. Yes. In order to extract the liquid from the container, it has to be poured. In order to pour the liquid, the container has to be tilted. When the container is tilted, the horizontal location of the end of the spout moves. Also, because the container bottom is round and has a hard edge, it presents a much smaller surface area as the can is tilted. Those combined factors make it very difficult and dangerous to pour from the Dinitro can.
- Q. **Do you have an opinion as to the steps that should be considered in designing a container such as this?**
- A. You first consider the product (in this case, the Dinitro). Consider the hazards of the use to the person using it, to the people around, and what has to be done in order to use the product.
- Q. **Mr. Steele, in your opinion, can the hazards that you have referred to be designed out of a container such as this?**
- A. Absolutely. And if the hazards could not be designed out, there should be an adequate warning. We know from the advertising that contact with the skin with this product can be fatal.

Q. Do you have an opinion with respect to the warning on this container?

A. Yes, I do.

Q. And what is that opinion?

A. The warning is a partial warning. It does not include the information that is contained in the advertising that absorption through the skin can be fatal. Information that is only contained in the advertising may not be seen by the consumer.

Q. Are there any other complaints you have with respect to the label?

A. None that I can think of at this time.

Q. Have you attempted to design an alternative product to the can in question?

A. Yes, I have.

Q. In your opinion, how would you modify this can to make it safe?

A. First, the process of tipping needs to be eliminated, because that creates an unstable activity with a full can. One way to eliminate the tipping is to replace the flexible spout with a spout that has a spigot on the end of it. With a spigot, the can can be laid on its side so that it's stable, and metering can be accomplished simply by opening and closing a valve. (photograph.) Second, the shape of the container could be modified to have a broader base, and the forward edge of the bottom rounded. (photograph.) When that type of container is tilted, the size and shape of the bottom surface in contact with the support remains essentially the same.

Q. Sir, isn't it a fact that the spout is a very common type spout?

A. Oh, yes, it's common and quite safe for gasoline or water. However, Dinitro is very toxic when absorbed through the skin. Having the spout which is actually stuck down into the container encourages a person to handle the chemical. It is definitely not a safe design.

Q. Are there any other alternative designs that you would suggest?

A. Yes. I might suggest that the liquid could be extracted from the container in other methods, such as pumping or siphoning.

Q. And how would that work?

A. Well, a bulb siphon could be utilized so that once the bulb is squeezed and the flow is started, the fluid would flow out by gravity.

Q. Do you hold any further opinions in this case?

A. Well, basically, no. Of course, there are many types of spouts that would be safer.

Q. Isn't it a fact that the type of container with which the user is the most familiar might be the safest container for the job?

A. In most circumstances, yes.

Q. Do you have any further comments?

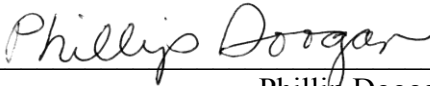
A. I don't believe the instructions with respect to wearing gloves are adequate. Rubber gloves would be safe, but not cloth or leather, since they would absorb the chemical and keep it in contact with the skin.

STATEMENT OF PHILLIP DOOGAN

My name is Phillip Doogan. I am a chemical consultant with Roe. I got my degree in toxicology and agriculture. My job is to go out to farmers and retail stores and sell our products. I am an expert in weed killers, how to use them, and what they can and can't do. I consult and advise our customers on proper uses, what crops need what weed killers, things like that. I've done this for 25 years. I've also farmed for 5 years in South Roosevelt. I'm not familiar with the Franklin area. I am very familiar with Pre-merge Dinitro. It's probably the best weed killer we have. Without it, lots of farmers in this state would go broke. I am also familiar with the facts of this case. I don't know Mr. Wilson.

First, you have to understand that all weed killers are toxic – that's what makes them work. Without chemicals like 2-sec butyl 4,6-dinitro, there wouldn't be enough food in this country. I received all reports on Dinitro. I have never gotten an adverse report about Dinitro, but I've heard second hand that such claims have been made. There is a problem with every weed killer with spillage – I know because of my own farm work and my meetings with farmers. We discuss the hazards of handling chemicals. The way Mr. Wilson poured Dinitro was very, very careless. Maybe I would expect that from an inexperienced farmer but not one with 30 years' experience. He says the splashing caused his injuries. I'm not a medical doctor, but I know of three instances where farmers have spilled Pre-merge on their arms. They never became ill or anything. I myself, two years ago, spilled some on my shirt – and I was fine. Any farmer knows that gloves *have* to be worn when pouring chemicals. I understand Mr. Wilson did not do so. Again, that action is careless and negligent. If he normally was so careless, over his 30 years, I can see how he would be so sick. Back 6 decades ago, that's what happened to old farmers who didn't know any better.

December 3, YR-4



Phillip Doogan

[Statement given to defendant's attorneys and made available to plaintiff in discovery proceedings.]

EXHIBITS

**Laboratory Medicine
Franklin Hospital
Franklin, Roosevelt 30640**

September 20, YR-5

E. L. Garfield
Medical Department
607 Building
Roe Chemical Company
Franklin, Roosevelt 30640

Dear Mr. Garfield,

Enclosed is a serum sample and an aliquot of a 24-hour urine on Mr. David Wilson, a 49-year-old male who has been exposed to dinitrobutyl phenol. On September 6th of this year, we sent you a serum and urine sample on this patient. The results appear to be presumptive evidence of previous toxic levels in his blood, and we would like to follow this up with a second sample.

The urine was collected with toluene as a preservative and the 24-hour volume was 1240 ml.

Thank you for your time.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Tom McGee". The signature is fluid and cursive, with a long horizontal stroke at the beginning.

Tom McGee, M.D.

TM:dm

cc: Dr. William Jason

**Duckworth Pathology Group
Laboratory Medicine**

No. 71-11595

September 18, YR-5

PATHOLOGIST'S REPORT

ANALYSIS FOR 2-SEC BUTYL 4,6-DINITROPHENOL ("DINITRO")

1. Serum -4.3 microgram per ml
2. Urine -less than 1 microgram per ml

COMMENT: This analysis was performed at the Roe Chemical Corporation in Franklin, Roosevelt. Dr. Charles Kramer, from Roe, says that in their employees they try to maintain serum levels less than 4 microgram per ml. Increased blood levels typically cause a hypermetabolic stimulation which simulates a hyperthyroid state with increased body temperature, etc. The half-life of dinitro in the human body is not known; however, Roe employees who develop the hypermetabolic state recover from the disorder in 8 to 10 days, usually. Since Mr. Wilson's exposure to the compound occurred approximately one month ago, the serum level of 4.3 micrograms per ml appears to be good presumptive evidence of previous toxic levels in his blood. A couple of case reports have been published of people developing peripheral neuropathy after significant exposures to chemicals similar to Dinitro.



Dr. Duckworth

cc: Dr. William J. Jason

**ROE CHEMICAL COMPANY
Medical Department**

October 1, YR-5

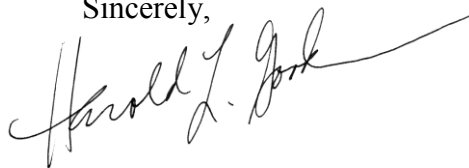
Tom McGee, M.D.
Department of Laboratory Medicine
Franklin Hospital Laboratory
Franklin, Roosevelt 30640

Dear Dr. McGee:

The serum and urine sample recently submitted for analysis for Dinitro is reported as having less than 1 microgram per liter in each of the two samples. The sensitivity of the analytical method does not extend below 1 microgram per liter. I am sure that you are aware of the icteric coloring of the serum specimen. If this color resulted from Dinitro, I am sure the serum level of this material would be extremely high.

We have not had any case reports of myopathy or peripheral neuropathy following exposure to Dinitro. Not surprisingly, there are also no epidemiological data suggesting an association between these chemicals and peripheral neuropathy and myopathy. I would be extremely interested in any facts on the case that you are at liberty to furnish me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Harold L. Gordon". The signature is written in black ink and is positioned below the word "Sincerely,".

Harold L. Gordon, M.D.
Roe Corporation Medical Director

cc: Dr. William Jason

September 24, YR-5

Dr. J. M. Weeks
188 S. Bellevue
Franklin, Roosevelt 30640

Dear Dr. Weeks:

I went to Dr. Jason as you suggested and thought maybe I should write you to tell you what he said.

Dr. Jason said considering the amount of Dinitro that I had in my blood that I was lucky to be here at all. He said it would have killed 99 out of 100 people. The experiments on the rats and mice killed a lot of them. It upset their metabolism and that because I had such a large dose that maybe I passed that level so quick that it saved my life. A few also died of cancer. This really has me worried.

Dr. Jason said that I had made some progress but that I had reached a plateau and that it would be at least two years from now before I would be able to do much of anything at all. Even then he said that I would never recover from the damage to my muscles and nerves. Who knows whether I'm developing cancer as I write to you?

Dr. Jason prescribed another form of cortisone and wants me to continue taking it for quite some time yet. He said it had given me a boost and if it were discontinued that I would go backward and become much weaker than I am now. He said that with the cortisone I could recover to the point that I would recover in three years, and without it, it would take eight or nine years.

He wants me to come back in six months.

Yours very truly,

A handwritten signature in black ink that reads "David Wilson". The signature is written in a cursive, slightly slanted style.

David Wilson

WILLIAM JASON, M.D.
12 N. Bellevue
Franklin, Roosevelt 30640
Phone 901/725-0011

November 2, YR-5

Dr. Harold L. Gordon, M.D.
Medical Director
Roe Chemical Company, Inc.
Franklin, Roosevelt 30640

RE: David Wilson

Dear Dr. Gordon:

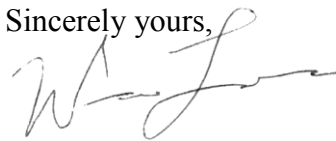
In response to your letter dated October 1, YR-5, there are published case reports of people developing neurological symptoms following exposure to chemicals very similar to 2-Sec Butyl 4,6-dinitrophenol. There are also strong animal data, that Roe and others have developed, that prove that Dinitro can cause neuropathy and myopathy. I agree that there is no definitive proof of cause and effect from acute exposure to 2-Sec Butyl 4,6-DPN and myopathy and neuropathy. Perhaps if Roe had funded more research, definitive proof would be available. It is pretty evident that Roe Chemical Company and the chemical industry has not done a good job studying this toxic chemical.

There is no doubt that Mr. Wilson has peripheral neuropathy and severe myositis which developed soon after Dinitro absorbed into his skin. The objective evidence of myositis, neuropathy, and serum levels of Dinitro are closely correlated.

The myositis responded to the usual treatment, which is not specific but does indicate that the myositis was probably caused by a mechanism consistent with muscle inflammatory diseases. In other words, since the basic etiological agent is not known in any of the muscle inflammatory diseases known as myositis, it is entirely possible that the absorption of the chemical and high blood level produced the same mechanism as in any myositic condition.

Any question of the role of Dinitro in causing Mr. Wilson's myositis will have to be settled by debate since science has been unable to conclusively answer this question.

Sincerely yours,



Dr. William Jason, Jr.
Neurologist

Drs. Gotten, Hawkes, Tyrer & Ogle
Neurological Surgery
92 North Bellevue
Franklin, Roosevelt 30640

May 24, YR-6

Dr. J.M. Weeks
188 S. Bellevue
Franklin, Roosevelt 30640

Dear Dr. Weeks:

Thank you for the opportunity to see your patient, David Wilson, in neurosurgical consultation. I am including the report of my examination and opinion. Coincidentally, after agreeing to see him I found a note in our files reflecting a prior consultation with Dr. Perkins, the physician who previously operated this practice, in connection with symptoms suspected of being caused by exposure to chemicals in the Gulf War. The note merely reflected Mr. Wilson's inquiry concerning the symptoms of such exposure, with which Dr. Perkins was only slightly familiar. He apparently referred Mr. Wilson to the VA for further information and possible care.

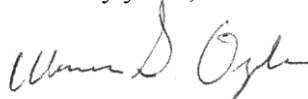
David Wilson, informed me that on May 17, YR-6, he was struck on the head by his car door. He was not rendered unconscious, but he was dazed momentarily. He did not experience any subsequent headaches. The following morning, as he described it, he felt "funny" with recurrent feelings of dizziness and a peculiar sensation about his head. His worry immediately increased over the head injury he had had in the past, and as you know, he was taken to the hospital in Blytheville where he was observed for a short period without receiving definitive treatment. Currently, the patient states that he is feeling better although he continues to have recurrent dizzy spells. The patient says he is not prone to worry; however, he has a new wife, and in the past several days she has given him reason for concern on several occasions. Their relationship is rather stressful due to those issues and due to his son, from a prior marriage, in the house. In addition, he has been missing considerable sleep, and he feels this may in some way contribute to his present illness.

The neurological examination was entirely within normal limits. X-rays of the skull, obtained at the Methodist Hospital, were normal. An electroencephalogram did not reveal evidence of any abnormality.

It is my feeling that this is an emotional problem, and the symptoms he describes are primarily on the basis of an acute anxiety state. I do not feel that additional investigative studies are indicated at this time. I reassured the patient that there was no indication of any active disease of the nervous system, and both parties seemed relieved and satisfied with the treatment that they had received. I instructed the patient that if he had additional difficulty, he should return for reevaluation.

I also suggested he may wish to consider therapy or counseling, either individually, as a couple or as a family if these issues persist.

Sincerely yours,



William S. Ogle, M.D.

**THE ROE CHEMICAL COMPANY, INC.
Franklin, Roosevelt 30640**

Memorandum

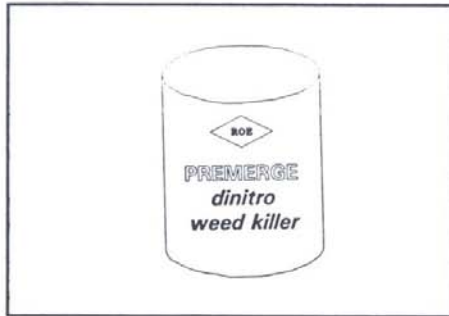
To: Director of Marketing
From: Director of Operations
Re: Labeling for Dinitro
Date: March 15, YR-5

Thank you for your comments regarding your concerns about the possible adverse impact on sales of a change in the labeling of Dinitro. However, we have come to the conclusion that including specific language reflecting that the product can be fatal if absorbed through the skin is appropriate although not necessary as a safety consideration. This decision is not based on any new information in our possession concerning the toxicity of the product or the danger to users of the product. Rather, it is being made out of an excess of caution given the litigious nature of today's society and the willingness of plaintiffs' lawyers to take frivolous cases against manufacturers in the hope of extorting settlements out of them. Our prior customer contacts and history have shown us that few customers read the labels on these products and certainly don't do so after the first time they use our product.

Therefore, the labeling for all shipments as of July 1, YR-5 (the expected date by which the new labels will be available) will reflect this change. The new label will include the following language directly below the words "Danger - Poison" and the skull and crossbones:

**KEEP OUT OF REACH OF CHILDREN AND FARM ANIMALS
MAY BE FATAL IF SWALLOWED OR ABSORBED THROUGH THE SKIN**

[Part of paint advertisements published by defendant before 8/6/YR-6 and furnished to plaintiffs in discovery.]



POISON

DANGER

ABSORBED THROUGH THE SKIN

• MAY BE FATAL IF SWALLOWED

Do Not Get in Eyes, on Skin, on Clothing • Avoid Breathing Spray Drift • Do Not Take Internally • Do Not Wear Contaminated Clothing or Shoes • Keep Away from Heat and Open Flame • Keep Out of Reach of Children and Farm Animals

FIRST AID TREATMENT—ANTIDOTE

SYMPTOMS OF POISONING. Excessive Fatigue. Sweating. Thirst and Fever. If symptoms of poisoning develop from any type of exposure, SEND FOR A PHYSICIAN.

FIRST AID: Have patient lie quiet in coolest spot available. If feverish, cool with cold compresses or by immersion in cool water.

If Swallowed, SEND FOR A PHYSICIAN. Induce vomiting by giving an emetic such as two tablespoonfuls of table salt in a glass of warm water; repeat until vomit fluid is clear, then give two teaspoonfuls of baking soda in a glass of warm water. Treat as in FIRST AID, above.

If Splashed in Eyes, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention. If Spilled on Skin, immediately remove contaminated clothing, including shoes, and wash skin with soap and plenty of water. If symptoms of poisoning develop, send for a physician and treat as in FIRST AID, above. Discard contaminated clothing and shoes or clean them thoroughly before re-use. NOTE TO ATTENDING PHYSICIAN: Active ingredient is a metabolic stimulant. Treat symptomatically.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

How to apply

To preserve a height differential between beans and weeds, the directed spray should be applied as soon as possible after the soybean plants are 5 inches tall. If treatment is delayed more than a few days, the weeds will catch up. The treatment can be repeated once or twice at 7- to 14-day intervals if necessary to control late-germinating weeds. Do not use after soybeans begin to bloom.

Plan your weed control program around PREMIERGE . . . It pays

A directed spray application of PREMIERGE costs only about 70¢ an acre. For this small investment you get positive control of the worst weed pests—cocklebur, annual morning glory, coffeeweed, pigweed and many other broadleaved weeds such as velvetleaf, common ragweed, smartweed.

Good weed control coupled with good fertility and management can increase soybean yields 20 or more bushels per acre. Growing weeds costs money—money you can save by using dependable economical PREMIERGE dinitro weed killer.

SOYBEANS SHOULD NOT BE GRAZED OR USED FOR FORAGE WITHIN THREE WEEKS AFTER APPLYING A POSTEMERGENCE SPRAY.

WARNING: Before using PREMIERGE dinitro weed killer, read and observe all the precautions given on the label.

[Part of paint advertisements published by defendant before 8/6/YR-6 and furnished to plaintiffs in discovery.]



Gives you the upper hand on broad-leaved weeds in soybeans

NOTE: PREMERGE may be fatal if swallowed or absorbed through the skin. Avoid breathing spray drift, and do not wear contaminated clothing or shoes. Read carefully and observe the warnings and precautions on the container label.

Keep out of reach of children and farm animals.



UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Pesticides Regulation Division
Washington, D.C. 20250

Roe Chemical Company
P. O. 1984
Eleanor, Roosevelt 01932

Attention: Mr. O. H. Hammer

Gentlemen:

Subject: PREMERGE
 USDA Reg. No. 98765-A

This is in reply to your letter of October 28, YR-37, informing us of the change in formulation for the above product.

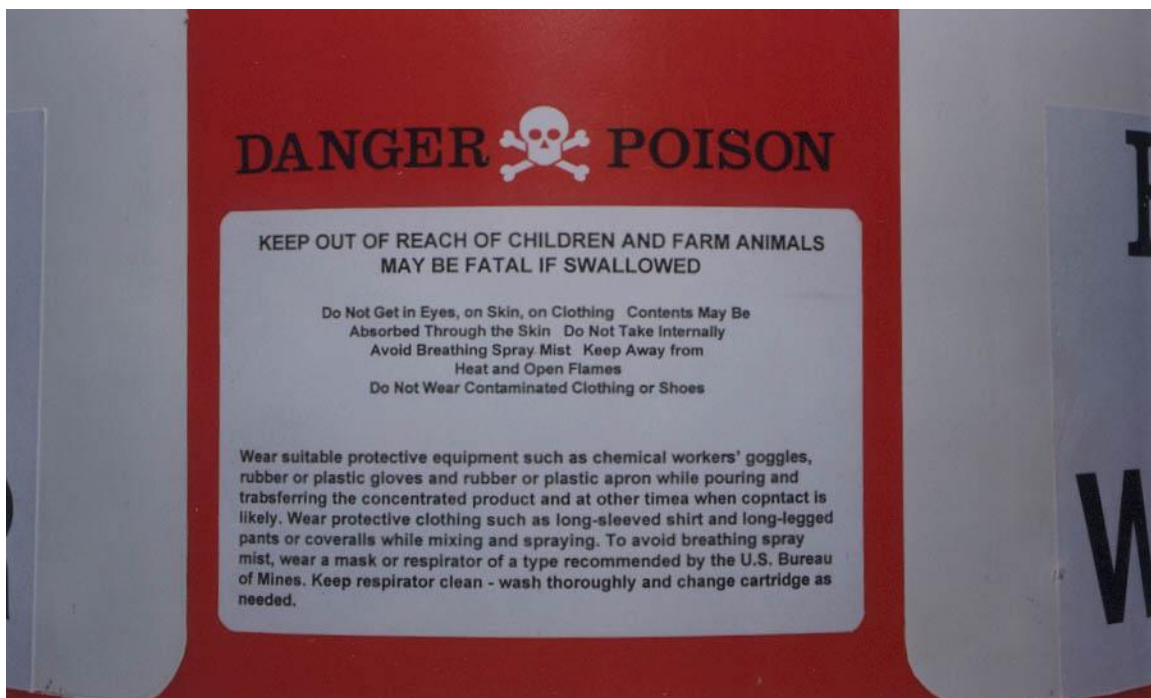
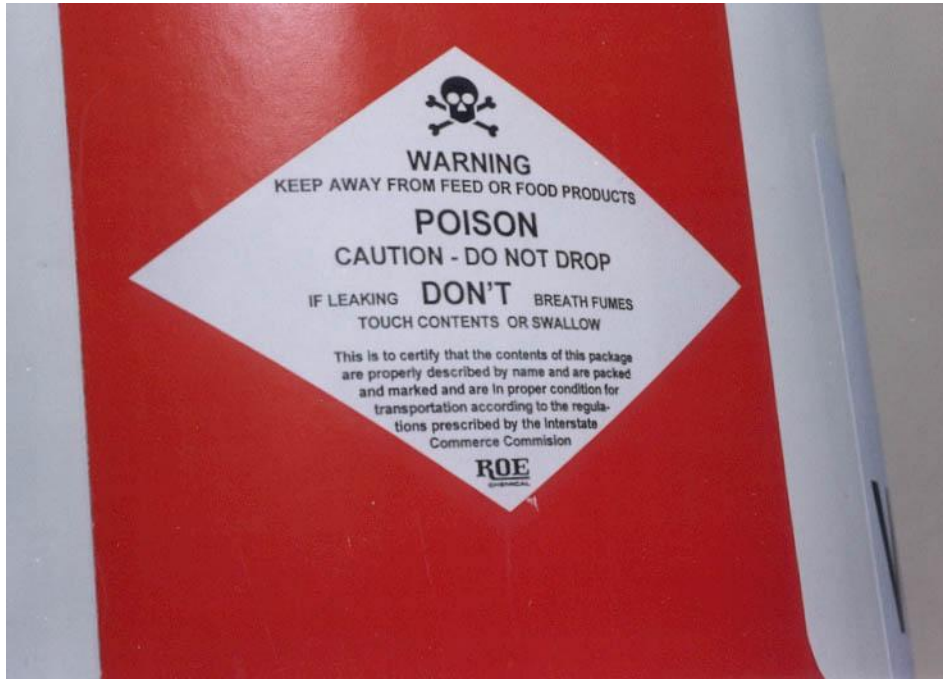
It is our understanding that this product under the new formula is to replace the old product accepted for registration on October 29, YR-37. The Regulations for the Enforcement of the Act provide that after the effective date of a change in claims or formula the product shall be marked only under new claims or formula, except that a reasonable time may be permitted to dispose of properly labeled stock or old products.

Sincerely yours,


Ima Bureaucrat
Assistant Director
For Registration

WILSON

Labeling on can sold to Wilson



Labeling on can sold to Wilson

DANGER  **POISON**

**KEEP OUT OF REACH OF CHILDREN AND FARM ANIMALS
MAY BE FATAL IF SWALLOWED**

Do Not Get in Eyes, on Skin, on Clothing • Contents May Be
Absorbed Through the Skin • Do Not Take Internally
Avoid Breathing Spray Mist • Keep Away from
Heat and Open Flames
Do Not Wear Contaminated Clothing or Shoes

Wear suitable protective equipment such as chemical workers' goggles, rubber or plastic gloves and rubber or plastic apron while pouring and transferring the concentrated product and at other times when contact is likely. Wear protective clothing such as long-sleeved shirt and long-legged pants or coveralls while mixing and spraying. To avoid breathing spray mist, wear a mask or respirator of a type recommended by the U.S. Bureau of Mines. Keep respirator clean - wash thoroughly and change cartridge as needed.



FIRST AID TREATMENT - ANTIDOTE

SYMPTOMS OF POISONING: Excessive Fatigue, Sweating, Thirst and Fever. If symptoms of poisoning develop from any type of exposure, **SEND FOR A PHYSICIAN.** **FIRST AID:** Have patient lie quiet in coolest spot available. If feverish, cool with cold compresses or by immersion in cool water. If Swallowed, **SEND FOR A PHYSICIAN.** Induce vomiting by giving an emetic such as two tablespoonfuls of table salt in a glass of warm water; repeat until vomit fluid is clear, then give two tablespoonfuls of baking soda in a glass of water. Treat as in **FIRST AID**, above. If Splashed In Eyes, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention. If Spilled on Skin, immediately remove contaminated clothing, including shoes, and wash skin with soap and plenty of water. If symptoms of poisoning develop, send for a physician and treat as in **FIRST AID**, above. Discard contaminated clothing and shoes, or clean them thoroughly before re-use. **NOTE TO ATTENDING PHYSICIAN:** Active ingredient is a metabolic stimulant. Treat symptomatically.

DANGER

ABSORBED THROUGH THE SKIN • MAY BE FATAL IF SWALLOWED

Do Not Get in Eyes, on Skin, on Clothing • Avoid Breathing Spray Mist
•Do Not Take Internally • Do Not Wear Contaminated Clothing or Shoes
•Keep Away from Heat and Open Flame
•Keep Out of Reach of Children and Farm Animals

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