

# Exterminators: The Politics of Chemical Fumigation—A Case Study

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## ABSTRACT

Chemical usage for pest management has been a sensitive issue for many years, representing a multitude of divergent opinions. The risks associated with chemical applications may pose a global threat to humanity and the environment. In Virginia, many incidents of misuse have been documented including the pollution of the Chesapeake Bay, the death of wildlife, the destruction of residential property, and a deterioration of consumer health. Yet until the 1986 death of the Watsons, an elderly couple residing in southwest Virginia, little attention was given to the toxic nature of chemicals. When the Watsons died because of an inappropriate application of Vikane, a fumigant, public fury was fueled. A series of reports entitled "Pests, Poisons, and Risks" in *The Roanoke Times & World News* generated public safety concerns. The goal of this case is to actively involve participants in the chemical controversy. Students are presented with various viewpoints portrayed by media reports and fellow classmates. Students are encouraged to defend their stance, while considering ethical issues surrounding opposing views. Ultimately, the participant must address the dilemma with a synergistic decision of providing safe and effective pest control services, while meshing the desires of consumers, exterminators, agriculturalists, and government officials.

CHEMICAL USAGE for pest management has been a sensitive issue for many years, representing a multitude of divergent opinions. The risks associated with chemical applications may pose a global threat to humanity and the environment. The goal of this case is to actively involve participants in the chemical controversy.

## The Case (Abridged)<sup>1</sup>

One Sunday morning I sat down in my easy chair with a piping hot cup of coffee and the Sunday newspaper. Instantly my attention was drawn to the front page story entitled "Pests, Poisons, and Risks." As a part-time farmer, I have always been aware of the public concern about pesticide usage. As I focused on the article I began to wonder what we farmers had done to deserve front page coverage. I scanned the article, and to my relief, discovered that agriculture was not the topic of discussion, instead, home exterminators were the focus. According to the *Roanoke Times & World News*, "bad things can happen when an exterminator visits."

<sup>1</sup> This is an abridged version of the original case. The complete case consists of 9 pages of text, 16 pages of exhibits, and a 15-page interpretive note. For a copy of the complete case contact the corresponding author.

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Mary Bishop, a staff writer, reported that Virginians have suffered at the hands of exterminators. Homes have been made unlivable, health has been ruined, and elderly have been cheated out of thousands of dollars. These instances have all been because of lax laws and regulations governing pesticides in Virginia. Pesticide misuse had even resulted in the death of an elderly Galax couple (Exhibit 1).

I took a sip of coffee, and eased back in my recliner. I was filled with mixed emotions. I was relieved that the agricultural industry was not responsible, yet I was outraged that exterminators were capable of inflicting human death. My heart sank thinking about the Watsons, who lost their lives during a routine fumigation. The Orkin sales supervisor had reassured them, "It's not dangerous, don't worry." If only Orkin had taken the proper precautions and monitored the house for Vikane levels, perhaps the Watsons would still be living.

After reading about the tragic death of the Watsons, I began to follow the pesticide series in the *Roanoke Times & World News*. I wondered if the death of the Watsons, along with the long list of other claims ranging from poor health and property damage to money theft, would influence the pesticide industry.

Mary Bishop's articles had elevated anxieties and skepticism among Virginia residents concerning the application of home insecticides. Several articles reported that the laws were not successfully monitoring the handling of pesticides in Virginia. According to Bishop no training or experience is needed for pesticide application. She stated, "In Virginia it is harder to become a hairdresser than an exterminator. Beauticians in Virginia must undergo extensive training and pass an examination. But to set up shop as an exterminator you need only a business license and sometimes not even that. You don't have to have any experience, training, or knowledge of pesticides."

She continually alluded to the fact that the state of Virginia did not control the pesticide industry. Virginia officials did not even know how many exterminators were operating statewide. Andre Perdue, head of the Roanoke Valley Pesticide Control Association, told Bishop, "We have people out there right now operating out of a trunk of a car without any insurance. This industry is wide open for it. You don't have to have any certification to be an exterminator. You can start an exterminating business tomorrow."

Bishop reported that once such a business is established, inappropriate handling of chemicals results in little or no reprimands. In one article, she wrote, "The restaurateur in Virginia whose service personnel sell beer to a minor can lose his ABC license. The pest-control company whose personnel render a home unfit for human habitation can go down the road and sell its services to another customer. Something is wrong."

Over 2.5 yr, 67 complaints were filed against exterminators at the state office of pesticide regulation (Exhibit 2). Of those cases, 41 were found free of pesticide misuse, and a

# Fumigation 'loaded gun,' experts says

By MARY BISHOP  
STAFF WRITER

GALAX—Hubert and Freida Watson's house was one of the show-places of Galax.

They designed the white-columned brick colonial in the early 1970s with architectural details they got from trips to Williamsburg and a Tidewater plantation.

They furnished it with Victorian antiques. An out-of-state professional decorated it.

They installed an elevator.

Solid walnut paneling went into the dining room.

The den was paneled with wormy chestnut.

Hubert Watson cut and dried the wood himself so it would be just right.

Wood, after all, was his life's work.

Until they retired, Hubert Watson owned Sawyers Furniture Co. here. Freida Watson, the company vice president, ran the office.

So it was no small matter when a man with Orkin Exterminating Co. in Roanoke told them that wood-boring beetles were eating their house.

The Watsons gave the go-ahead for an \$8,000 fumigation.

On Sept. 25, 1986, the men from Orkin put a huge red-orange tarpaulin over the Watsons' five-bedroom house at the corner of Roseland Road and Bona Vista Lane.

It was an astonishing sight—like a giant fluttering piece of fabric art. The Watsons' next-door neighbor took a picture.

The Watsons abandoned their home—usually buzzing with their 13 grandchildren—and stayed with a daughter overnight.

Orkin workers pumped the house full of Vikane, or sulfuryl fluoride. The colorless, almost odorless gas permeates wood-furniture, wood-work, everything—to kill wood-eating bugs.

A former Orkin sales supervisor remembers reassuring the Watsons about the fumigation when he settled with them on a price.

"...I met the people, and the last thing I said to the people before I left their home was, 'It's not dangerous, don't worry,'" Emmett Lee Farmer testified in an unrelated lawsuit last year.

Another Orkin worker said that the Watsons could move back in after 3 the afternoon of Sept. 26. And they did.

Within a few hours, according to federal court documents, the Watsons were sick. They experienced nausea, chills, weakness—all symptoms of Vikane poisoning. On Sept. 28, Hubert Watson had a severe spell of coughing. His wife called the rescue squad, but he was dead by the time he got to the hospital.

Hubert Howard Watson was 73 years old.

Richard Haskin, a neighbor who visited Freida Watson shortly after

Hubert Watson died, recalled that she needed help getting to the phone to take condolence calls. Haskin said she was weak and coughing.

By the time of her husband's funeral, Freida Settle Watson, 65, lay dying in Twin County Hospital. She died Oct. 2.

A state medical examiner says Vikane killed the Watsons.

Hubert Watson's body was embalmed without an autopsy. So, the medical examiner said, he could not chemically confirm Vikane as the agent of death.

But Dr. David H. Oxley, deputy chief medical examiner for Western Virginia, says Hubert Watson's physical problems were the same as those of his wife, whose body was given a full autopsy. In an opinion filed by a federal judge in U.S. District Court in Roanoke, Oxley was quoted as saying both died of "respiratory failure secondary to massive severe pulmonary edema due to exposure to a toxic agent (Vikane)."

In layman's terms: They stopped breathing because of fluid buildup in their lungs.

## 'It's a loaded gun'

Industry officials say Vikane has been used in millions of fumigations and that deaths are rare. They say victims usually are burglars trying to loot a fumigated house that's still vacant or somebody who has intentionally entered an unsafe house to commit suicide.

Some states make exterminators post a guard at houses during fumigations. Virginia does not require guards unless the pesticide label does.

"Fumigation is no small matter. It's a loaded gun," said William Robinson, a Virginia Tech expert on household pests who wrote the Virginia Cooperative Extension Service's manual on fumigation.

A state pesticide inspector testified that Orkin workers acknowledged not using an air monitor to see if the Watsons' house was safe for occupancy, as recommended on the Vikane label.

"They didn't even make an attempt to monitor it," Douglas S. Vaught, the former Grayson County commonwealth's attorney, said in an interview. Vaught went to church with the Watsons and prosecuted the local case against the exterminators.

Farmer, the former Orkin sales supervisor, said in an interview that the company's Roanoke office didn't own a monitor. When Orkin officials from Richmond visited the Watsons' house after the couple died, Farmer said, he was told to go to Virginia Tech and pick up a monitor owned by another exterminator.

Industry leaders and state regula-

tors say virtually no exterminators used the air monitor recommended by Vikane's manufacturer.

"We were told that the whole industry, not just Orkin, but the whole United States, wasn't using monitoring equipment at that time," said William E. "Billy" Walls, Virginia's chief pesticide regulator who investigated the Watson case.

An inspector with the state Office of Pesticide Regulation said the Orkin men didn't follow other label instructions:

■ They didn't remove waterproof-covered cushions and mattresses. Removing cushion's can be crucial. Theoretically, someone sitting on cushions hours or days after a fumigation can be subjected to puffs of trapped gas.

■ They didn't use a strong-smelling warning agent along with the Vikane. Chloropicrin, a pungent chemical that makes the eyes tear, is supposed to be used with the odorless Vikane so exterminators and homeowners can know whether a house has been aired out completely. The smell is also supposed to help keep intruders out.

In April, a federal grand jury in Roanoke indicted Orkin Exterminating Co. Inc. on five counts of misapplying Vikane. On Aug. 8, a federal judge ruled the company failed to use a monitoring device to determine whether it was safe to enter the Watsons' home after the fumigation. The other four charges against the company were dismissed.

Assistant U.S. Attorney Richard Pierce said the agreement to drop four of the charges was worked out after Judge James C. Turk ruled Orkin could only be punished on one charge.

Turk had decided before the trial that because all five charges were related, the most severe punishment Orkin could face would be a fine of \$500,000—whether for one conviction or five, Pierce said.

A sentencing hearing is scheduled for next month. At that time, arguments will be heard as to whether the Watsons' deaths were a direct result of Orkin's actions. If so, Orkin could face the \$500,000 fine. Otherwise, the maximum fine will be \$100,000.

Judith Donner, an Orkin spokeswoman at the company's headquarters in Atlanta, has declined comment since the federal charges were filed.

## Shaking up the industry

The Watsons' deaths sent a shudder through the national pest control industry.

Dow Chemical Co., Vikane's maker, previously recommended air-monitoring instruments for use with Vikane. Now, it makes exterminators prove they own an air monitor before they buy Vikane.

Dow has declined to talk about the case. Gary Hamlin, public affairs manager for North American Agricultural products, a Dow subsidiary, said only that Dow denies responsibility for the Watsons' deaths. Orkin has also denied responsibility for the deaths.

Right after the Watsons died, an

Orkin spokesman in Atlanta told reporters the Watsons had heart problems. The couple's doctor of many years said that was not true, and Richard Haskin, the Watsons' next-door neighbor, testified in court they were active, vibrant people.

"Oh, these were very vital people, not elderly at all," said the Rev. Robert B. Hudson, their former United Methodist minister.

Daymon Robertson and Ron Mullins, the Orkin workers who supervised the Watson fumigation, pleaded guilty in Grayson County Circuit Court last year to a misdemeanor charge of pesticide misuse. They received suspended sentences.

The men surrendered state permits for general, wood-infesting and food-processing pest control for five years. Robertson still works for Orkin in Roanoke, and Mullins is with Orkin in Charlottesville.

When the Watsons died, there was no requirement that anyone in a company be state-certified in fumigations to use Vikane. That's now required by federal law.

Involuntary manslaughter charges against the two exterminators and against Orkin as a corporation were dropped by Vaught, the former prosecutor, so federal authorities could bring indictments.

Under Virginia law, the stiffest penalty for a corporation in a wrongful death case is a \$1,000 fine for each count. A violation of pesticide label directions poses a fine of \$500. The maximum state punishment Orkin would have faced for the two deaths would have been \$2,500.

The executor of Freida Watson's estate sued Orkin and Dow in federal court last year for \$2.5 million, alleging that she dies as a direct result of her exposure to Vikane. That trial is set for December.

## Having nightmares

Emmett Lee Farmer, the former Orkin sales supervisor, said recently he will never forget the last time he saw the Watsons. Farmer is now with Brown Exterminating Co. in Pulaski County.

"...then two days later the man's dead," Farmer testified in an unrelated lawsuit, "and that just ate me out inside." He said in an interview he still has nightmares about the case.

The Watsons' neighbors remember when the Watsons' house was full of life, then the place was overrun with grandchildren.

Though the Watsons had a fancy home, they weren't possessive about it. They opened it to friends, family, visiting church youth groups, the Christmas banquet of the church choir and other gatherings.

Friends and neighbors said Hubert and Freida Watson were known as some of the most generous people around Galax, helping often when they heard of people in trouble. They gave their money anonymously and rarely talked about it.

Said Robert Hudson, their former minister. "They did it in such a way that no one was aware."

majority of the remaining cases only had resulted in warning letters.

Another Sunday morning commenced with my routine of drinking coffee while browsing the paper. Articles concerning pesticides had become as common as the comics. I continued following the reports in anticipation of a resolution. Would the uproar catalyzed by the *Roanoke Times & World News* be calmed? What exactly would have to be done to alleviate the skepticism encompassing exterminators?

Pest control companies were beginning to defend their tumbling reputations. Companies like Terminix argued in defense of the competency of its operators via a letter to the readers of the *Roanoke Times*.

Orkin attempted to redeem itself with a full-page letter in the *Roanoke Times & World News*. Orkin expressed its condolences for the deaths of the Watsons, while emphasizing that the Galax fumigation was not representative of its business activities. Orkin also stressed that it is dedicated to high standards of safety in providing effective pest control services.

I sipped my coffee, while digesting what I had just read. Homeowners were skeptical and some even hysterical. The media had fostered panic in exterminators, customers, and state officials at the Office of Pesticide Regulations (also referred to as the Office of Pesticide Management) in the U.S. Department of Agriculture. How could pesticide regulators make amends?

A few days later, talk of stiffer regulations and punishments was circulating. Some people opposed tighter regulations, while others saw stricter regulations as a means of sprucing up the image of legitimate operators. Ron Chaney, President of the Virginia Pesticide Control Association,

acknowledged the need for more government control, as long as the controls are laws "that we can live with."

Governor Baliles reacted to public concerns by establishing an eight-person pesticide enforcement team, The Council on the Environment, costing \$535,000. The panel was requested to conduct a 90-d investigation of pesticide regulations in Virginia (Exhibit 3).

The Council aroused the concerns of agriculturalists. Farmers vocalized their opinions at a public forum in Harrisonburg. One farmer announced that chemicals have made great contributions to fruit production. He also warned that in the past "near panic" was created because of new federal regulations. Farmers suggested that the panel should only increase regulations where problems could be documented.

Billy Walls, Virginia's Chief Pesticide Regulator, expressed his concerns about the banning of agricultural pesticides, "If you eliminate too many pesticides, you are

## Council on the Environment Findings:

### INTRODUCTION

Pesticides are widely recognized for their contributions to modern society. The productivity of modern American agriculture owes much to the use of chemical pesticides. Some estimates indicate that world-wide food production could drop by as much as forty percent without agricultural chemicals. Public health throughout the world would be in a far more precarious state were it not for the use of pesticides in the eradication of insect, rodent and other disease vectors.

However, pesticides are a concern because they are so effective and because they are widely available and common toxic chemicals. For most other chemicals, toxicity is merely incidental to their main purpose in manufacture or other chemical processes. Except in rare cases, their release into the environment occurs only by accident. Pesticides are different. They are meant to be poisonous and cannot reach their intended targets unless released into the environment.

It is essential that pesticides—both their chemical make-up and their use—be strictly controlled to minimize the risk to public health, safety and the environment while allowing their continued use to benefit society.

Any program which seeks to manage or control the risks associated with pesticides must concentrate in two areas. First, it must ensure that the pesticides work the way they are intended, are not toxic to non-target organisms, or are not excessively persistent in the environment, or are not excessively persistent in the environment beyond the time of their intended use. Secondly, the management of pesticides must concentrate on the proper application and use of the chemicals, including developing less toxic alternatives. This report examines all aspects of pesticide use and management in Virginia.

...Overall, the subcommittee finds that Virginia's citizens do not have adequate assurance that pesticides used here are safe for use under Virginia conditions and that they are applied in a way that guarantees public health, safety and the protection of the environment. This is in part due to insufficient training and verification of competence for those who apply large quantities of pesticides, and in part due to inadequate monitoring, enforcement and penalty provisions. It is compounded by the lack of basic data on the chemicals themselves and how and where they are used, by the lack of public understanding regarding the appropriate use of pesticides, and by the lack of applied research to guide management actions. Virginia's pesticide management program as a whole suffers from a lack of direction, oversight and coordination and insufficient staffing and funding support. In addition, the subcommittee finds gaps in program elements dealing with disposal of pesticide wastes and worker and public safety.



Exhibit 2. Complaints in Virginia.

Exhibit 3. Council on the Environmental Findings: Introduction.

going to affect the cost of food and fiber.” When Furadan, an agricultural pesticide that environmentalists claimed to have killed bald eagles, was under siege in 1987, a Virginia Tech Extension Entomologist wrote Billy Walls, adamantly opposing the regulation of Furadan: a “good insecticide.”

The news featured additional coverage concerning pesticides in agriculture. Lt. Governor, Doug Wilder, was quoted at an annual Farm Bureau meeting, “It is obvious to all of you as it is to me that, without pesticides, the American farmer could not feed the people of this country...but it is also obvious that the use of pesticides has created problems.”

Editorials and commentaries featured in the *Roanoke Times & World News* depicted readers’ viewpoints. One reader wrote an editorial suggesting that in the process of settling the disagreement that persisted over additional regulations, people must be protected. He stated, “Protecting people, let’s recall, is what this whole controversy is about.” Another reader suggested that the government and exterminating businesses should not bear total responsibility for claims of pesticide misuse. She stated that we live in a period of “information overload”. Information indicating the dangers of chemicals is readily available. She asked, “In this age of information overload, how much protection should willful ignorance purchase?”

Occasionally readers still write letters to the editor in response to the pesticide series. One reader wrote the editor alleging that the pesticide reports had been one-sided. “She (referring to Mary Bishop) heard one side of the issues, thus her article had a very negative tone.”

As I see it, the media has captured the concerns of both the private and public sector. Exterminators are defending their reputations, pesticide regulators are investigating existing laws, farmers are voicing their concerns, and residents are expressing their fear and anger. All citizens have an opinion, whether positive or negative, about pesticide application and regulation. Most Virginians recognize the contributions chemicals have made to our society, however negative publicity has clouded our perception.

I am a farmer and consumer of agricultural commodities and a resident and homeowner in southwest Virginia. I want to see agriculture continue to meet the needs of our population, yet I want to see my family protected against environmental hazards. To ensure that my concerns are addressed I plan to testify at one of the forums held by the Pesticide Enforcement Board (Council on the Environment). What should I recommend to the Council concerning pesticide regulations?

#### Case Exhibits<sup>2</sup>

1. The Roanoke Times & World News. August 1988. Fumigation “loaded gun,” expert says. Included with this abridged version.
2. The Roanoke Times & World News. August 1988 Visual of complaints in Virginia. Included with this abridged version.

<sup>2</sup> This list shows all exhibits included in the complete case. In this abridged case, only Exhibits 1 and 2 are shown in their entirety. Exhibit 3 is displayed as a condensed version of the original exhibit.

3. The Council on the Environment. 1989 excerpts from the published review on findings concerning pesticide regulation in Virginia. Condensed version included in this abridged case.
4. The Roanoke Times & World News. 21 Aug. 1988 article “Pests, poisons, and risks.”
5. The Roanoke Times & World News. 25 Aug. 1988 letter to the readers from Terminix, stating the competency of Terminix as a pest control service.
6. Orkin. 20 Nov. 1988 letter to the Roanoke Valley Community, expressing condolences to the Watson family, while emphasizing that the incident was not representative of its work.
7. The Roanoke Times & World News. August 1988 article “Exterminators want some government regulation.”
8. The Roanoke Times & World News. 28 Sept. 1988 article “Pesticide study worries farmers, orchardists.”
9. The Roanoke Times & World News. 20 Feb. 1987. Letter to Bill Walls at the Office of Pesticide from James Roberts, extension entomologist at Virginia Tech, indicating his belief that no chemicals should be banned.
10. The Roanoke Times & World News. 12 Oct. 1988 letters to the editors “Pesticide stories confuse the elderly.” and “Pesticide hearings: One-sided report.”
11. The Roanoke Times & World News. 23 Oct. 1988 editorial “Exterminators not selling cookies.”
12. The Roanoke Times & World News. 28 Oct. 1988 commentary “Restrict exterminator’s role.”

### TEACHING NOTE

#### Case Goals and Objectives

The aim of this case is to familiarize students with the sensitive issue of chemical application for home exterminations and commercial food and fiber production. Students should be aware of how even a single instance of chemical misuse can result in chaos for the pesticide industry. Participants will ultimately be challenged to resolve the pesticide dilemma through a synergistic approach that will benefit both the pesticide industry, and consumers.

After completion of the case, students should be able to:

1. Recall specific problems associated with chemical application.
2. Explain the circumstances leading to the death of the Watsons.
3. Explain the role of the state, exterminators, agriculturalists, and consumers in ensuring public safety in regards to chemical usage.
4. Explain how the media’s portrayal of an incident can cause disruption within an entire industry.
5. Decide if Virginia’s pesticide laws are adequately monitoring the handling of chemicals
6. Determine if additional government regulation of pesticides is necessary
7. State who to target if new laws are implemented

#### Use of the Case

This case is applicable to a wide-ranging audience. Any individual interested in promoting synergy between the pub-

lic and private sector, regarding the use of chemicals, may benefit from Exterminators.

### **Study Questions**

In-class discussion of the following questions will guide participants to the main issues within the case.

1. Who is responsible for the death of the Watsons?
2. Is the media coverage of the pesticide industry in the best interest of the public?

3. Who, if anyone, should be taking a defensive stance: consumers, state officials, or exterminators?
4. Should the agricultural industry be dragged into an exterminator's problem?
5. What action should the reader recommend the Council take?

The author's insights to the study questions are provided in the complete teaching note.◆