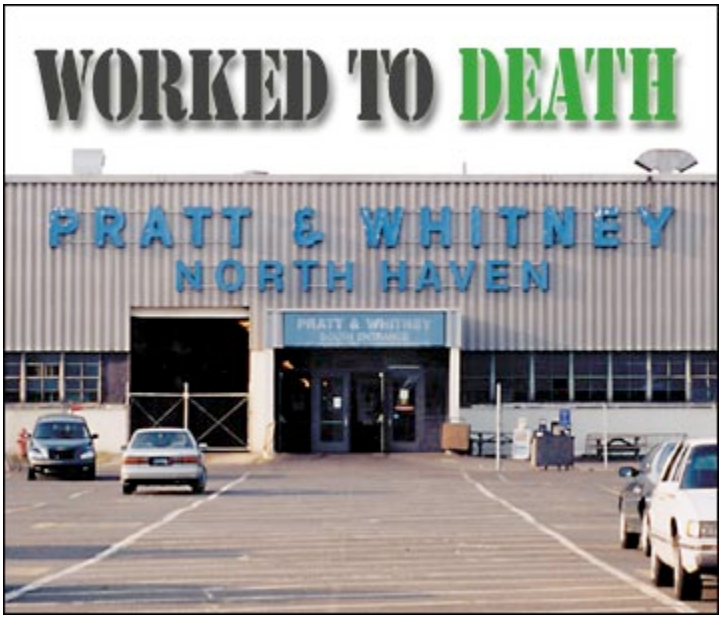

Pratt & Whitney leaves behind a trail of cancer.

By Carole Bass & Camille Jackson

"He always smelled," says Kate Greco. "He wouldn't wear his shoes in the house because they were so black on the bottom. They would get heavy from the weight of the grease. After doing her husband's laundry, she says, she could still smell the oil fumes emanating from John Greco's flannels, colored tees and jeans in the dryer. Tide and non-chlorine bleach were no match.

Carol Shea washed the laundry for her husband (also named John) separately, sometimes with a mixture of Tide and Borax, and always ran an empty wash with a cup of chlorine bleach to sanitize the washer after. When their three grandkids stayed over, Carol would hand-wash their clothes. An extra precaution against chemical irritants.

The chemical smell that followed John home from work was so strong, Carol says, that he put plastic covers over the seats of his truck. "It smelled like the oil you put in your car," she says.

John Shea went through a pair of work boots--steel-toed Pratt & Whitney "oil-resistant" work shoes--every three months. The shoes would be so black and oily, the soles would come off. "He couldn't bring them in the house," says Carol, looking down at the immaculate smoky blue carpet.

"Sometimes the solvents would overheat and the machines would explode. He'd come home drenched," she says. "He'd have to wash his hair twice to get it out."

The two Johns, as they were called, worked alongside each other at Pratt & Whitney's North Haven plant, making jet engine parts for more than 30 years. They were as much buddies as colleagues, sharing a friendship that grew on the job.

Their wives have also grown close--as widows. John Greco passed away on Good Friday, April 21, 2000, from a rare cancerous brain tumor--glioblastoma multiforme. John Shea had already been diagnosed with the same type of tumor. He died less than a month after Greco.

Dick Cortright died two days before Greco. Like "the Johns," he worked at Pratt & Whitney North Haven for more than 30 years. Like the Johns, he died of glioblastoma.

So did three other longtime workers at the North Haven plant. All told, the state Department of Public Health has confirmed eight diagnoses of primary brain tumors among former Pratt North Haven employees in the last 10 years. Six of those are glioblastoma, an aggressive cancer with a five-year survival rate of about 3 percent.

According to the Central Brain Tumor Registry of the United States (www.cbtrus.org), glioblastoma strikes an average of 2.96 people per 100,000--less than .003 percent--every year.

The state health department, in consultation with federal health and safety experts, is investigating the possibility of a brain tumor cluster at Pratt & Whitney North Haven. It's a massive undertaking, requiring examination of thousands of employee records dating to the 1950s. A department spokesman says the current focus is on looking for additional cases and figuring out how many people have worked at North Haven over the decades.

It's too soon to know *whether* there's an abnormally high rate of brain cancer, let alone why, says the spokesman, Michael Purcaro.

But union representatives and widows like Kate Greco and Carol Shea wonder. Somewhere amid the engine parts they were so proud to manufacture, amid the toxic solvents and metal dusts they inhaled and the contaminated well water they drank and the 100-degree temperatures they sweated through, did there lurk a killer? Some chemical trigger that caused longtime Pratt workers' brains to turn on themselves, generating tumors that produced seizures, paralysis and, too swiftly, death?

"Everyone there is afraid. Somebody gets a headache now, they panic," says Carol Shea. "This is terminal. My husband was lucky to make it a year."

Carol Shea says her husband's oil-soaked work shoes used to fall apart after three months. Inset: A healthy John Shea, above; below, Shea's scar from the surgery to remove his tumor.

Shea and Greco have filed workers' compensation claims blaming conditions at Pratt & Whitney for their husband's deaths. The two widows are looking to each other for support as they seek justice from the company they believe is liable for their husbands' deaths. Working closely with health & safety representatives from their late husbands' union, Machinists Local 707, they've contacted Channel 8, which aired a report in May, *60 Minutes*, federal authorities, anyone who might help.

The authorities are cautious: Much still needs to be uncovered about the Pratt illnesses. While some studies have linked certain occupational exposures with brain cancer, nobody knows for sure what causes the tumors. But the circumstantial evidence is strong.

"The possibility is high that John Shea's occupational exposure resulted in his developing a primary brain tumor which led to his death," wrote Dr. Jonathan Knisely, a

radiation oncologist at the Yale School of Medicine, in a letter supporting Carol Shea's workers' comp claim. He treated both John Shea and John Greco.

In an interview, Knisely notes that he's not an epidemiologist and can't say for sure. But "seeing two guys work in the same shop with the same exposure with [the same] unusual type of brain tumor seems like more than a coincidence."

Pratt & Whitney has sharply cut employment in North Haven, to about 1,000 people from a peak of "several thousand," according to the company's affable PR guy, Mark Sullivan. It plans to close or virtually close the mammoth factory. But those who remain continue to work with toxic, even carcinogenic, substances in an enivornment that is, in places, visibly filthy. (See accompanying story, "Oil City Revisited.") And those who leave will be transferred to Pratt's East Hartford and Middletown plants, which have their own share of problems, racking up a dozen federal health and safety violations between them in the past decade.

In the meantime, Pratt & Whitney isn't giving up anything.

"There's a lot more we don't know than we know," says Sullivan. Pratt is "cooperating fully" with the health department investigation, he says, but it's painstaking work. "To my knowledge there's no magic answer waiting around the corner. I know that's disturbing to people," but collecting and sorting through mounds of data has to be done accurately.

Responding to the suggestion that dirty, dangerous plant conditions may have contributed not only to brain cancer but to all manner of health problems, Sullivan says: "All manufacturers, not just Pratt, do things a lot differently now than they might have done in the 1950s and '60s. North Haven was run in accordance with the generally accepted standards of the time. We never knowingly did anything that endangered anybody. A lot of things would be considered unconscionable now."

Dottie Hodas worked at Pratt & Whitney North Haven for 20 years. She's been retired for two years, but her memories of inspecting blades and vanes remain fresh. She sprayed the parts with a fluorescent green penetrant called Zyglo, which helps workers spot minute cracks. Her disposable plastic suit would be covered in the stuff. She also used another chemical, trichloroethylene, to clean oil from the parts. Later they switched to soapy water when they figured out trichloroethylene, or TCE, was a carcinogen.

Dottie Hodas

Hodas says she could see the effect of the airborne chemicals as they corroded metal fixtures on the walls. "I would say, 'We're not made of steel; we're flesh and blood.'" If the acids ate away the metal parts like that, she figured, imagine what they were doing to the workers.

Hodas would put on the disposable plastic suit before work, to protect her clothing. But her hands would get itchy from a white powder coating the parts she handled. Always a union worker, she says, she and others in her department fought to get rubber gloves in the early '80s.

She believes she got sick to her stomach from hand-spraying the fluorescent penetrant. Again, in the mid-'80s, she and the union fought for an automated system with a cylinder that contained the part being sprayed. But in the mid-'90s, management reorganized the operations, departments were split up and they went back to hand-spraying. At that point, Pratt provided Hodas with a big mask to cover her nose and mouth.

After losing half her colon and half her stomach, Dottie retired early from Pratt in 1999 at age 60. She thinks she's still around because, unlike others in her department, she wasn't a smoker. Quite a few of them are dead or have terminal illnesses.

So is her husband of 34 years, Pratt machine repairman John Hodas. He died in March 1992 at age 57--of gliobastoma multiforme.

Dottie and John Hodas

"He liked tinkering with machines," says Dottie. Every day he worked in a different area of the plant. She says he didn't use chemicals but, like all other workers, was around them. "He always smelled like chemicals and oil and grease."

John Shea and John Greco both worked in blade and vane grinding for most of their careers, using high-speed grinding machines to fashion the metal engine parts. Metal dust--nickel, chromium, cadmium--filled the air, mixing with cutting fluids and coolant. Over the years, the manufacturing processes have changed, and Pratt has replaced some of the nastiest compounds with less toxic substitutes. Still, it's a soup of chemicals, the health effects of which have been studied individually but not necessarily in combination.

John Greco never used any protective equipment, according to his widow. "I don't know if he even thought about it," says Kate, sitting at her kitchen table against a

backdrop of grandkids smiling from photographs. Her grandson's toy table and chair are set up in the living room. She lights a cigarette.

"He worked overtime, sometimes Saturdays and Sundays, and I feel in my heart" that conditions at the plant caused his death.

Carol Shea visited the plant a half-dozen times during open houses. It was loud with the whir of machinery, and she could smell the same pungent chemical smell that followed her husband home each day.

John Shea and his co-workers would come home with sores on their arms, like a blistery rash, his widow says. John wouldn't wear shorts to work and always used moisturizer to prevent his skin from cracking. Although the couple was careful with John's clothes and skin, they never suspected the chemicals were as dangerous as they are. "Pratt & Whitney said it was safe," says Carol.

Proving chemical exposure caused any specific case of cancer is an enormously tricky task. Proof becomes all the more difficult--perhaps impossible--when you consider that a) researchers suspect, but don't yet know, that certain chemicals and certain occupations contribute to brain cancer; and b) it's hard to pin down exactly what chemicals the Pratt & Whitney tumor victims were exposed to, in what quantities and for how long.

Researchers believe primary brain tumors--those that begin in the brain rather than spreading from elsewhere--are either genetic or caused by environmental exposures. Carol Shea and Kate Greco say neither of their husbands had family histories of brain tumors.

Occupational studies have found higher rates of brain cancer among workers in the petroleum, agricultural, plastics and, in some cases, metalworking industries. Other studies have linked human brain tumors to specific chemical exposures, including organic solvents, formaldehyde and lubricating oils. Some of these studies deal with brain cancer generally. Some focus on the broad grouping known as gliomas, and some on the subset of gliomas called astrocytoma. Only a few focus specifically on glioblastoma, a type of astrocytoma.

This spring, Yale epidemiologist Tongzhang Zheng published a new occupational study based on his examination of 375 glioma cases in Iowa. He found an increased risk of brain cancer for, among others, sheet metalworkers and workers with high exposure to solvents.

Zheng published a second study based on the same data. It found no link between tobacco and human brain cancer. That was a surprise: Experts consider tobacco the biggest human source of N-nitroso compounds, which cause brain tumors in animals.

Carol Shea produces a raft of MSDS papers--Material Safety Data Sheets, standard information that manufacturers provide about the chemical make-up and health effects of their hazardous products. She says Pratt & Whitney employees, people who knew her husband and the work he did, obtained them for her and told her John used all of the substances listed at some point in his career. Among them: sulfuric acid, which contains formaldehyde; many petroleum-based cutting fluids and lubricants; and numerous organic solvents. Those include trichloroethylene, or TCE, a human carcinogen, and the nearly identical-sounding but somewhat milder 1,1,1 trichloroethane.

Gary Frattalone has worked at Pratt in North Haven for 15 years. For the past three, he's served as a health & safety rep for Local 707. He's got a high school education and no training in chemistry, biology, epidemiology--everything he knows about toxic chemicals, he's learned on the job. But he knows a lot about the plant's operations.

"For a long time they degreased their own parts, so that was the trichlo," he says of Shea and Greco.

Like everyone else who worked there years ago, Shea and Greco drank contaminated well water. An internal Pratt & Whitney test report from 1982 shows levels of TCE and 1,1,1 trichloroethane that were elevated but below the legal limits. Two years later, the state health department deemed the facility's well water "unsatisfactory." A health department letter says Pratt switched to public water for "all domestic uses" by September 1984, although Frattalone--who emphasizes that in general, he's speaking for himself and not for Local 707--recalls the changeover happening later.

In any case, changing the drinking water didn't end workers' exposure to the contaminated well water. P&W still uses it--treated "to some degree," but not to drinking-water standards, according to PR guy Sullivan--in its coolants, particularly in the area known as the Blohm grinding area. And Frattalone says that when the Blohm grinders were running at full capacity, their coolant tanks lost 1,000 gallons a day. That's 1,000 gallons of chemicals and contaminated well water, spilling onto the porous wooden floor or evaporating into what Frattalone calls the

"Blohm mist," which got sucked into the lungs of anyone who happened to be breathing in the vicinity. The mist mixed in the air with metal dust from the nearby laser area, where workers drilled holes in parts made from nickel and chromium--both carcinogens.

Workers also routinely stuck their hands in the coolant, Frattalone says. "We didn't even start getting gloves until '95-ish."

The very high temperatures in the plant--sometimes over 100 degrees by all accounts, including Sullivan's--would have cranked up the exposure all around. Pores open wide at that temperature, and lungs are more vulnerable as well. Sullivan confirms that the plant wasn't fully air-conditioned until 1994.

Chuck Atcherson and Dick Cortright, two of the other Pratt employees who died of brain cancer, worked near the Blohm area, Frattalone notes. So did Robert "Lucky" Markovics, who now suffers from a brain tumor that was present since he was a baby but that Frattalone believes could have been triggered by the environment at Pratt.

Lucky Markovics

Frattalone is full of stories, all of which he tells in the same low-key, matter-of-fact style. For many years, he says, the coolants were oil-based. Then they switched to chemical- or animal-fat-based formulas. "The stuff turns rancid after 30 days, maybe. It used to smell like sewer water. So they put it on a schedule where they were supposed to change it every two or three weeks. But they didn't change it until the operator called and said, 'I can't stand it anymore.'"

He used to work in EDM--electric discharge machining--which makes holes in parts by vaporizing the metal, he says. "These little puffs of smoke would come out. It would take your breath away."

As he describes it, EDM operators stood at a tank filled with oil. They were supposed to put the part they were machining into the tank, perform the process, drain the tank, change the part, then refill the tank. But pressure was on to keep production high. So to save time, they'd stick their arms into the oil and change the part instead of draining the tank.

"Your skin got crusty," Frattalone recalls. "After a while, when it bothered you, you'd go to medical. They'd give you a barrier cream: 'Try this first.'" When the barrier cream didn't work, employees would be given gloves. "Eventually they'd move you to another area," he says. But guys didn't make too much noise about it: "You're a girly

man if you complain about the stuff you're working with."

EDM operators are supposed to use respirators, Frattalone says. But when someone asked for one, management "would make a big deal about it: You've got to go to medical, you've got to get your blood pressure checked. You've got to shave. And it was real hot in there." In general, he says, personal protective equipment like gloves and masks are not widely used, and supervisors don't enforce where they're required.

Ventilation is terrible, Frattalone contends. In the Blohm area, a federal health & safety team recommended improving the exhaust system three years ago. (See accompanying story below, "The Jet Part Jungle.") The result, according to Frattalone: "They collect the fumes in a mist filter and then dump it back into the building. If you don't maintain that filter"--and he says P&W doesn't--"you're dumping dirty stuff back in."

Other areas exhaust to the roof of the building. But Frattalone says at least one exhaust vent is right next to a heating/ventilation/air conditioning intake, and that the second duct sucks dirty air directly from the first.

He also tells of the area known as Oil City, where hot oil used to vaporize and then condense on the factory ceiling. In the cold weather it coagulated. But when the plant temperature rose, the oil would drip onto the heads and shoulders of people working below.

And then there were the degreasers--vast pits of heated solvent, 20 to 30 feet deep. Workers would put gunked-up engine parts into a tray that hung from a hoist above the pit and lower the tray into what he describes as "a cloud layer above the liquid"--not into the liquid solvent, but just the fumes. "You put it in there for five minutes, maybe less, and it was squeaky clean. That was just the vapor. It was the most powerful thing I ever saw."

Did workers come into contact with the solvent?

"It had this suction so the vapor would never come out of the tank," Frattalone says. "But guys were constantly looking in, sticking their heads in." And more.

"When I first started working there, I splashed grease on myself. A guy said, 'Come with me.' He took me over to the degreaser pit and said, 'Take your shirt off.' So I did. He put my shirt in the mist and it came out clean, and I put it back on.

"We were kind of ignorant," Frattalone acknowledges. "I always figured they wouldn't put me in a situation that was

dangerous. You know if you're cutting metal you should wear safety glasses. That's common sense--they teach you that in high school." But nobody taught him about toxic chemicals.

Still, even he "thought it was crazy" when he occasionally saw guys stick their foil-wrapped lunches into the degreaser vapor to heat them up.

Sullivan, the company spokesman, says he's heard the same stories about heating lunches in the degreasers, but "we've not been able to document it."

Well water, Sullivan says, is used only in "closed-loop coolant systems. We haven't used it for anything that any employees would come in contact with since at least the early 1980s." Asked about Frattalone's contention that the Blohm coolant system used to lose 1,000 gallons a day, he replies: "Cooling systems lose coolant. It goes away. It evaporates."

But then it's not a closed loop, is it?

Sullivan backpedals. The plant meets federal Occupational Safety and Health Adminstration standards, he says. "We feel confident that we have done a good job in the environmental health and safety area in the plant. Have we made mistakes in the past? You bet. Have we tried to do better? Yes."

Personal protective equipment is used where required, he says. "We have a very strong safety and a very strong enforcement program."

The ventilation system "works properly," Sullivan insists. "More importantly," he continues, the union has never raised these issues. "We don't think either of those are real problems. If the union does think there are problems, there are vehicles to bring it up. We want to hear about it, we want to fix it if there's a problem."

"Oh, yes, we've raised it," returns Frattalone. "They tell us it's below the PELs"--the Permissible Exposure Limits set by OSHA. He notes that OSHA's federal cousin NIOSH, the National Institute for Occupational Safety and Health, suggests stricter air standards. Trouble is, NIOSH can only advise; enforcement is up to OSHA.

To Frattalone's other specific complaints, Sullivan responds: "We don't want to go into that because we don't have sure knowledge. Things probably happened there in the '50s and '60s that certainly would be considered bad practice now."

He likes to talk about the '50s and '60s. But Frattalone's firsthand experience is from 1986 forward. What's more, Ed Northern, who was North Haven plant manager for a couple of years in the early '90s, confirms some of what Frattalone says. The union guys say Northern cleaned the place up, particularly Oil City.

"The whole place was very dirty when I started there. Yeah, there was oil hanging from the ceiling," acknowledges Northern, who's now director of worldwide manufacturing operations for Delphi Energy & Chassis Systems in Michigan. "Within six months, nine months, it was spotless. And we kept it that way." He hasn't seen the place in six years, though.

"The plant was an old plant. We did a lot of cleanup, painting, moving machines," Northern says. "We had a lot of accidents. From a health and safety standpoint, we made some tremendous improvements."

When John Shea was stricken with the aggressive tumor, John Greco came home to Kate with death on his mind. He told her that, if anything ever happened to him, he wouldn't want to be a burden or linger in pain. "I never would have thought in a million years ..." says Kate, trailing off.

A healthy man who exercised three times a week and occasionally smoked a Salem Light, John was a jokester and a flirt. "He thought he was James Dean," says Kate, showing old photos of a younger, thinner, playful John, in his trademark dark tinted glasses, hamming it up.

Kate says he loved working at Pratt and was proud of it. More than a year after his death, she still has items with Pratt & Whitney's "North Haven Aircraft" insignia around her Waterbury home: a company shirt, a license plate holder, a plastic cup, a glass candy jar.

One of his few complaints was the heat. "He'd come out in 90-degree weather and think it was cool," she says.

Over time, John began to complain about headaches. He'd planned to retire in December 1999, at age 62, and do all the things he loved: fishing, traveling, shopping, spending time with his family. The week of his retirement party, Kate says, he uncharacteristically took a sick day. After he returned to work, he was sitting in the cafeteria when he dropped a cup of coffee for no reason. Later, when he tried to talk, he couldn't get the words out. Running errands with John in the driver's seat, a quick trip to the bank landed them across town. Kate thought it was odd. So did John.

The next day, he left work in an ambulance. He wound up in the neurological intensive care unit at Yale-New Haven Hospital. Doctors told the couple they'd found a baseball-sized tumor in the front right lobe of his brain. They operated immediately.

John wore a Pratt & Whitney baseball hat during chemotherapy. It started conversations because "everyone knows someone who works at Pratt," says Kate, smirking at the irony.

As his health deteriorated, the seizures increased and John lost his speech. Kate made up "yes" and "no" cards for him to point to. One day he had three massive seizures. Kate and her family watched while John thrashed on the hospital table.

By March, the tumor had grown back to the size of an egg. "It doubles its size every 11 days," says Kate, who spent hours at a time researching the tumor and treatments on the Internet. John's brain couldn't tell his muscles what to do. Kate put a hospital bed in the living room and hired a home health aide. John needed help changing position in bed, going to the bathroom, eating. She took a medical leave from her job to care for him full-time.

"I would have done anything," says Kate, leaning against the kitchen counter where she kept bottles and bottles of vitamins and herbal supplements for John. "Poor guy," she says. "I was making him take all these pills" just to prolong the inevitable.

"He was always conscientious about his job. You figure you're working with the military, with the government," says Carol Shea, poised on her white living room sofa. The house is neat and smells of potpourri. A chess board is on the coffee table and a Galileo telescope points out the window.

She says John started out at P&W polishing and cleaning parts but quickly moved up the ranks to lead man, putting in as many as 60 to 70 hours a week.

They blamed his busy schedule for a sudden rush of headaches. Always steady on his feet, he fell three or four times for no reason. Then he experienced hand tremors. They thought it might be Parkinson's disease. Four months later, in June 1999, John had his first seizure.

The couple didn't know it was cancer until after John's first operation. His incision went from ear to ear. After surgery, the Sheas were told that John could have paralysis on one

side and maybe some memory loss. There was no paralysis, but there was some memory loss. It bothered him that he couldn't
remember his third granddaughter's name. He couldn't remember the name of his doctor or his medications.

By the end, John couldn't speak, recognize items or recognize his wife. Carol put him in hospice. He was 56 years old. The cancer had spread down his spine. Two and a half weeks later he was gone. John's old boss sent a plant.

Dottie Hodas' condo, with its exposed beams and location on a Wallingford golf course, feels like she's retired to Florida, except for the pile of logs by the brick fireplace. Framed family photos crowd each other on end tables and atop the floor-model television.

What she wants now, nine years after her husband's death, is for Pratt to clean up its factories.

"I'll tell you now, the people down there are dedicated and experienced and proud of the parts they make," she says, her voice rising. "It's up to the company to take care of the people." She'd hate to see the jobs move to Mexico and overseas, where manufacturing standards are not as high. "Pratt is known for having the best engines in the world."

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The Jet Part Jungle

If workplace safety is in the eye of the beholder, the feds sure have beheld Pratt & Whitney a lot over the years. The federal Occupational Safety and Health Administration has cited the giant jet engine-maker's Connecticut facilities for 196 violations on 39 occasions since 1972, according to the agency's online database. Of those, 133 violations were at the North Haven plant. That doesn't count another 11 violations that OSHA initially cited but later deleted.

The most recent violations at North Haven came in 1999. An inspection in April of that year resulted in $90,000 in penalties for five violations stemming from North Haven's failure to keep proper records of on-the-job injuries and

illnesses. A separate inspection in February 1999 found eight violations--two labeled "serious," one "repeat" and five "other"--as well as 10 other violations that were later deleted. They ranged from problems with lockout devices (designed to shut down unsafe machines) to failure to have a qualified person make sure equipment was de-energized to failure to keep floors clean and dry.

OSHA had cited the North Haven plant for serious violations--including improper handling of machine lockouts and machine guards--just two years earlier, in December 1996.

In 1987, a North Haven worker was killed by a 1,300-pound piece of equipment that was being hoisted from a furnace when a clamp popped off and the equipment swung around. The penalty: $1,200.

In the early 1980s, Pratt & Whitney went to federal appellate court to fight OSHA's order to change one of its venting systems.

OSHA isn't the only federal agency that's been checking out workplace conditions at Pratt North Haven. The National Institute for Occupational Safety and Health, or NIOSH, did a 1998 study of respiratory illness at the request of Machinists union Local 707. Unlike OSHA, which is charged with enforcing federal law, NIOSH is an advisory agency, an arm of the Centers for Disease Control.

The NIOSH team looked at workers in the Blohm grinding unit, who reported many more respiratory problems than co-workers who were not exposed to the same metalworking fluids. The investigators found that while "housekeeping was good in most locations," many machine operators didn't use protective gloves as required. Air samples were mostly within NIOSH's recommended exposure limits, or RELs. But "because workers in other [metalworking] environments have developed adverse health effects from exposures below REL, lower exposures are desirable whenever possible," the NIOSH report says. Among the recommendations: mandatory glove use, ventilation system improvements and greater encouragement of employees to report "all potential work-related health symptoms."

Gary Frattalone, a Local 707 health and safety rep, says Pratt management "completely ignored" the NIOSH recommendations. Company spokesman Mark Sullivan says Pratt adheres to OSHA standards.

--Carole Bass

Oil City Revisited

If this is a cleaned-up factory, someone call a doctor--quick.

By Joshua Mamis

Pratt & Whitney's North Haven plant is big, long and low, located on its own road off Route 5. From the crest of the road approaching it, I try to imagine how many football fields would fit inside the 1.4 million-square-foot building. Four? Five?

In its heyday, thousands of workers put together jet engine parts inside the walls. Working at P&W was a great job for a mechanically minded kid out of high school. The pay was good, the work, regular.

On the day I visit, the parking lot is eerily empty. A few more cars than on Christmas Day at the Connecticut Post Mall. The workers slowly file in at 7 a.m. No traffic. No competition for parking spots close to the door.

There's also little security. I wander around the front door waiting for a worker I know to bring me inside. He's late, but nobody seems to care that I'm here. Not long ago, security would have accosted an unknown body without an ID tag slung from his neck in the time it would take to read the *Register*. Not today.

When my acquaintance finally meets me, we simply walk inside.

First stop: Oil City, where many workers started out. It's now dark, work shifted to other locations. In the old days, Oil City work was done on machines from which oily vapors rose to the ceiling, condensed and hung there, eventually falling back to the floor. Workers came home with their skin slick from oil.

Throughout the building, I see filter after filter on air vents caked with dust and soot.

In one such section, just outside a room once used for laser

drilling, union health and safety advocate Gary Frattalone points out an enormous air duct. Where two sections connect, it is streaked with black. When the filters back up, he says, the soot gets out. The air is vented into the work space. Another duct is vented above a closed-in work space that workers refer to as a condo.

"This is where Lucky worked," says Frattalone, "or not so lucky, I should say." Lucky is almost blind now, the result of the brain cancer he is currently surviving. Right above where I imagine him standing is the vent. Follow an imaginary line from the vent opening to the top of the condo, and you see black on the roof. Solid black. A little further to the left on the roof, it gets less black, then a little further, finally, "clean." The vapor and the dust may or may not have caused Lucky's cancer, but it isn't hard to imagine him sucking in those fumes while he worked.

Elsewhere, we come to a small blue case with a glass top outfitted with gloves. You slip your hands in the gloves to work on an engine part inside the box. Underneath the box, on the floor, is a layer of what looks like metallic dust. The safeguards are inadequate, Frattalone says. "It doesn't take rocket science to see it." But rocket science--at least, jet engine science--is just what's going on here.

Pratt & Whitney's official line about conditions at its plant: Whatever happened in the '50s and '60s, the company has always followed the law and cleaned up problems. But as the plant winds down, the company appears to pay as little attention to workers' safety as it does to its unannounced visitors.

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For more information or to report a possible new case of brain cancer at Pratt & Whitney North Haven, contact the Connecticut Department of Public Health's Division of Environmental Epidemiology and Occupational Health at (860) 509-7740. Machinists union Local 707 can be reached at (203) 234-4289.

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