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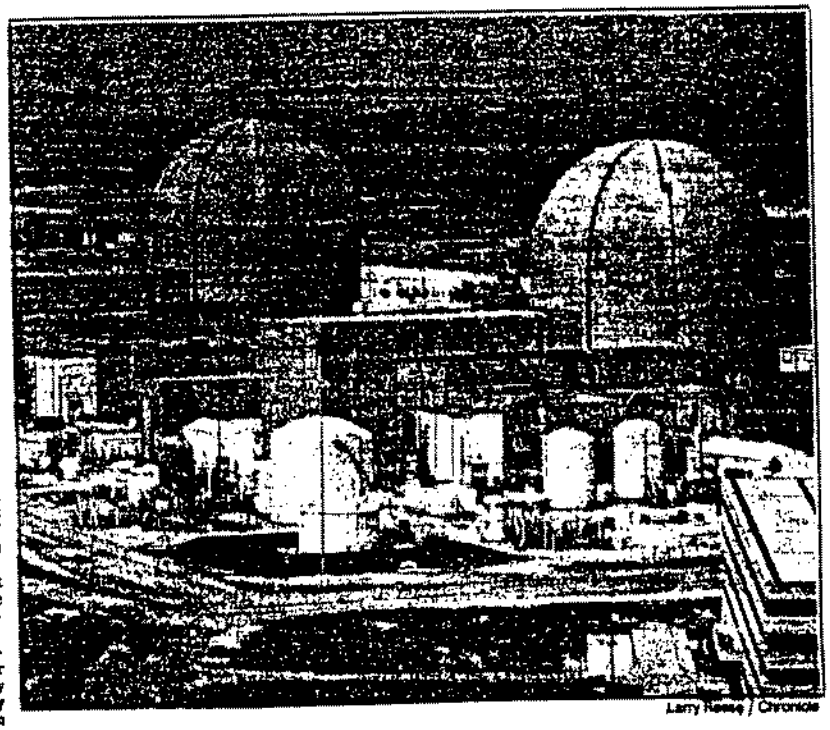
Feds scrutinize HL&P firings

NRC seeking indictments over dismissed whistle-blowers

By JIM MORRIS



Larry Reese / Chronicle

Federal investigators are seeking unprecedented indictments against Houston Lighting & Power Co. officials for allegedly retaliating against four former workers who raised safety concerns at the South Texas nuclear power plant, the Houston Chronicle has learned.

Sources say the U.S. Nuclear Regulatory Commission has referred the cases to the U.S. Department of Justice, urging prosecution. Any indictment of an HL&P official would be the first in the nation under an NRC rule that makes it a potential criminal offense to intimidate and harass workers in the nuclear industry.

At the root of HL&P's legal troubles is a nuclear security program of questionable effectiveness. An internal company memorandum says that during a training exercise last year, a simulated terrorist team was able to penetrate the "vital area" of the South Texas plant, located in Matagorda County near Bay City.

The criminal charges being sought against HL&P by the NRC arise mainly from three security department firings on May 4 and 5, 1992.

On May 4, security supervisor David Lamb and security coordinator James Dean were told by security manager Richard Balcom that they were victims of a "reduction in force" by cost-conscious HL&P. The next day Balcom fired senior security coordinator Bill Worth, ostensibly for the same reason. Those were the only dismissals in the department.

The three men had been complaining to HL&P for years about sloppy security procedures, broken or malfunctioning equipment and the illegal withholding of information from the NRC. Exasperated, they had gone to the NRC in 1991.

In a confidential report obtained by the Chronicle, the NRC's Office of Inspector General concluded that Lamb, Dean and Worth appear to have been fired in retaliation for making "security-related and misconduct" allegations to HL&P and the NRC.

The inspector general "analyzed the process used to justify the terminations and determined that it was

See HL&P on Page 22A.

E. Joseph Deering / Chronicle

Former Houston Lighting & Power Co. security officials David Lamb, left, and James Dean believe they were fired from the South Texas nuclear power plant, above, last year because they had raised safety concerns with the company and the U.S. Nuclear Regulatory Commission. The NRC is seeking indictments against HL&P officials for allegedly retaliating against Lamb, Dean and two other former plant workers. Lamb, 46, and Dean, 38, say they have been unable to find work in the nuclear industry since their dismissal by HL&P.

Clampdown: The silencing of nuclear industry workers

HL&P

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conducted in a manner prejudicial to the alleger," the report says.

"Investigators also found that "several HL&P managers" — including group vice president-nuclear Donald Hall, vice president for nuclear generation Warren Kinsey and security manager Balcom — "had some degree of knowledge" that the three security men had made allegations with HL&P's "confidential" employee-concerns program, called Speakout, and/or the NRC.

HL&P spokesman Graham Painter denied that any criminal acts occurred, saying Lamb, Dean and Worth "were part of a work force reduction. There was no retribution against them for having reported deficiencies to the NRC. ..."

As the first anniversary of the HL&P security department firings approaches, however, utility officials have more to worry about than the intimidation-and-harassment cases pending in the Justice Department.

HL&P officials also may be held criminally or civilly liable for allegedly misleading the NRC about security-related matters, including power failures that knocked out parts of a force field and the mismanagement of sensitive "safeguards" information.

And the company — or even individuals — may be hit with substantial NRC fines, not only for mishandling employee allegations but also for failing to reduce a huge maintenance backlog and correct conditions that led to repeated human errors and equipment failures.

Bill Beach, director of reactor projects for the NRC's Region IV office in Arlington, said there are "in excess of 5,000" items that need maintenance at South Texas, raising questions about whether HL&P has "lost control" of its maintenance program. One plant source put the backlog at more than 10,000 items.

HL&P spokesman Glen Walker said that most of the items in need of repair are not "safety-related" and denied that any HL&P officials withheld information from the NRC. He said that the utility recognizes maintenance as a problem, however, and has increased staffing and taken other steps to correct it.

Whether the NRC suspends HL&P's operating license or takes some other drastic action — a protracted, voluntary plant shutdown, for example — depends largely on the findings of a special "diagnostic" NRC inspection team, due to arrive at South Texas on Monday and complete its work in about a month.

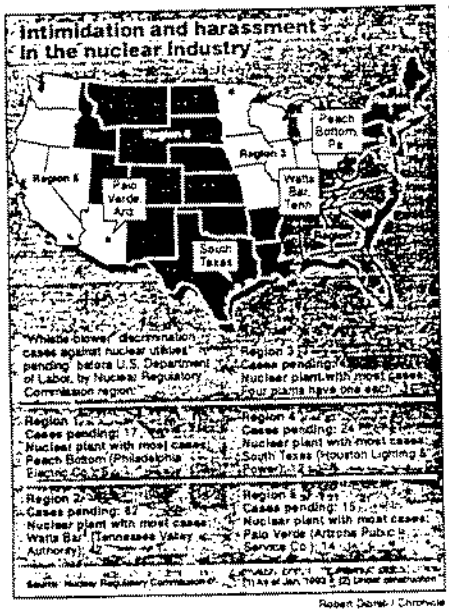
"We are taking this quite seriously," said NRC Chairman Ivan Selin, "but there's no sense in speculating about what (the diagnostic team) will find."

What it is likely to find, according to eight current and former South Texas employees who spoke with the Chronicle, is a work force that is afraid to go to managers with concerns, and managers who do not want to hear bad news. Dozens of other people and documents obtained under the federal Freedom of Information Act paint a similar picture of an autocratic, vindictive management team.

Last fall, the Chronicle began an investigation into alleged intimidation and harassment in the U.S. nuclear industry that lasted five months and included interviews with more than 150 people, among them 35 whistle-blowers. South Texas quickly stood out.

Nuclear industry whistle-blowers who believe that they have been wrongly fired or otherwise punished can file discrimination complaints against their employers with the U.S. Department of Labor. The NRC tracks these cases and sometimes investigates safety allegations raised by the whistle-blowers.

As of late January, according to the NRC, there were 12 discrimination cases pending against HL&P or its contractors as a result of alleged retaliatory actions taken at South Texas. That is the highest number, by far, in Region IV, which regulates nine nuclear plants in 14 states. It is the third-highest number in the nation. Only the Palo Verde plant near Phoenix and the Watts Bar plant, under construction in eastern Tennessee, are the subjects of more whistle-blower cases.



Robert Durell / Chronicle

Painter said "lots" of South Texas employees make use of HL&P's Speakout program. "They obviously wouldn't be using it if they didn't feel comfortable with it," he said.

But two current South Texas workers interviewed during the inspector general's investigation had disparaging things to say about Speakout. One called it a "lap dog" for HL&P vice presidents and said that when someone made use of the program, "his or her identity was soon known by ... management."

The NRC takes allegations of whistle-blower intimidation and harassment very seriously. NRC inspectors can examine only 1 percent to 5 percent of a nuclear plant, and the agency depends heavily on self-policing by utilities.

"We have damned few inspectors and a lot of licensees (nuclear plants and other NRC-regulated users of radioactive materials)," said Ben Hayes, director of the NRC's Office of Investigations. "If this commission cannot rely on the licensee to be truthful and candid when that is a major safety issue as far as I'm concerned."

The NRC expects nuclear utilities to encourage the reporting of problems by employees, NRC officials say, however, that at some plants there seems to be a "kill the messenger" philosophy. Managers, under great pressure to contain costs, tend to downplay the importance of almost anything brought to their attention. Employees who press matters find themselves in trouble.

Some are taunted by co-workers. Others are stripped of meaningful duties and isolated from the work force. Others are tormented by obscene calls and death threats.

This sort of psychological warfare is "worse than taking a physical beating," said NRC Inspector General David Williams.

On Monday, two investigators with Williams' office are to arrive in Houston and interview South Texas workers as part of a nationwide inquiry into the NRC's handling of intimidation-and-harassment complaints. The inquiry was requested by Sen. Joseph Lieberman, D-Conn., who said he is troubled by "allegations that the NRC has been biased toward the power companies, toward the licensees, and has overrelied on the statements of licensees."

Some believe that whistle-blowers in the nuclear industry are punished on a much broader scale than the NRC realizes or acknowledges, given that some and perhaps most victims don't bother to file Labor Department discrimination cases against their employers.

"It's almost universal," said Robert Pollard, a former NRC official now with the Union of Concerned Scientists.

It is widely known that when one whistle-blower in a nuclear plant is fired or disciplined in a highly visible way, other workers notice and may resolve not to mention any potential safety problems they encounter. The NRC calls this a "chilling effect."

Current and former South Texas workers say that such an atmosphere has existed at the plant for years.

The three security men who were fired in May 1992 — along with Jim Neal, 51, who had seen the "handwriting on the wall" and quit in March of that year — had tried and failed to get HL&P to fix faulty equipment and follow NRC procedures, they said.

Neal recalled, for example, that power failures would cause the "E-field" — an energy field along the plant's perimeter that detects intrusion — to go out for "extended periods of time." A utility is required to post armed guards when such an outage occurs, but Neal said that HL&P didn't do so. Nor, he said, did it report the power failures to the NRC.

HL&P's Walker said that the E-field has been repaired and the utility has fulfilled its NRC reporting obligations.

A current plant worker, however, said that "in a lot of cases, when it rains, the entire (E-field) system goes down."

Internal HL&P documents obtained by the Chronicle indicate that employees in the South Texas security department have brought numerous shortcomings to management's attention in recent years.

A Jan. 29, 1992, memo from J.W. Hinson, then administrator of security investigations and compliance, to security manager Balcom identifies 26 security flaws, from inadequate lighting to access by "unauthorized personnel ... to the armory and/or weapons."

A Feb. 3, 1992, memo from Neal to Balcom notes that during two security drills four days earlier, officers responded so slowly and inappropriately to a simulated terrorist attack on the plant that the "adversarial team would have been successful in their mission during both drills."

Walker conceded that the drills "did not go well," but said that the security department's poor showing "led to some improvements that we have now incorporated."

The need for tight security at nuclear plants became starkly apparent on Feb. 7, when a man just released from the mental ward of a hospital sped through the main security gate at the Three Mile Island plant in Pennsylvania. The man crashed his station wagon through two fences to enter the plant's "protected" area and was found hiding in the turbine building four hours later.

Security, however, has been a weak link at South Texas for some time.

In June 1987, HL&P expected to receive a "low-power fuel-load" license for Unit 1. But NRC inspectors from Region IV found the plant's security program to be in shambles, and licensing was held up for 84 days.

"The training was deficient," said James Kelly, a senior Region IV security inspector at the time. "They hadn't conducted it and said they had. The electronic detection systems did not function as designed. The access-authorization program — the pass-and-badge portion — was in disarray."

Later that year, HL&P's contract security agency, The Wackenhut Corp., was fined $30,000 by the Texas Board of Private Investigators and Private Security Agencies for 157 violations, including making "material misstatements" on applications.

Lamb, 46, and Dean, 38, arrived at South Texas in 1986. Both had worked at Florida Power & Light Co.'s Plant St. Lucie near West Palm Beach, Fla., and had had no trouble with management there, they said.

HL&P, in Lamb's opinion, was indifferent to NRC regulations. In 1988 he, Dean, Neal and Worth — who declined to be interviewed for this article — began complaining about poor access-control and intrusion-detection procedures, broken surveillance cameras and the utility's failure to report these problems to the NRC as required. The whistle-blowers said they were given progressively less to do and faced growing hostility at work.

"If you complained once, they might listen, but generally nothing was done," Lamb said of HL&P. "If you complained twice you started getting the very strong feeling that you should shut up and go someplace else. If you did it a third time ... you were made to feel that you were not to be trusted, because you were no longer playing by their rules."

Bill Lancaster, an ex-FBI agent who was a security supervisor at South Texas from 1984 to 1987, confirmed Lamb's description.

"Basically, nobody wanted to hear that there were any problems," said Lancaster, 40, who now works for the U.S. Department of Energy in Ohio.

Lamb and Dean filed Labor Department discrimination cases against HL&P shortly after they were fired. Both won favorable rulings in the initial round of the process but are by no means assured of victory in the end. Such cases routinely take years.

Lamb is working as a salesman in a field unrelated to nuclear security, at about one-third of his $50,000-a-year salary at South Texas.

"I've gone through most of my savings. It's been a hardship on my marriage. I've contacted at least one half of the nuclear plants in this country and have gotten rejection letters or verbal rejections from all of them."

Dean is unemployed. "People in the nuclear industry," he said, "no longer return my calls."

Said Houston attorney Tanner Garth, who represents Lamb and Dean: "If you get canned in the nuclear industry, good luck."

Painter denied that HL&P engages in blacklisting. But the nuclear industry is in many ways a small fraternity. People move around a lot. Management philosophies, good and bad, are transferred as well.

For example, Will Jump, South Texas's manager of nuclear licensing, and Dan Sanchez, project manager of its maintenance training program, came from the Palo Verde plant in Arizona. Palo Verde has more whistle-blower discrimination cases pending against it than any other operating plant, and South Texas is second.

Kinsey, HL&P's vice president for generation, and William Cottle, upcoming group vice president-nuclear, worked for the federal Tennessee Valley Authority, which shut down all its nuclear plants in 1985 because they were having so many operational and construction problems. One of the plants, Watts Bar, has been a hotbed of alleged retaliation against whistle-blowers.

Sources say that the criminal harassment-and-intimidation case Justice will consider against HL&P relates to the utility's actions against Lamb, Dean, Worth and contract employee Tom Saporito.

Saporito, 35, is a nuclear instrument-control technician who went to work at South Texas on Jan. 13, 1992. He was permanently denied access to the plant — putting him out of work — on Feb. 21, 1992, three days after he had met with the NRC and 11 days after he had filed a formal petition with the agency, asking that HL&P's license be suspended, modified or revoked because of "significant" violations.

Saporito, who now lives in Florida and has a Labor Department discrimination case pending against HL&P, said his biggest concern was "very lax security" at South Texas.

"There was no control of visitors," he said. "Security was a joke over there. It was the worst security I've seen in my career."

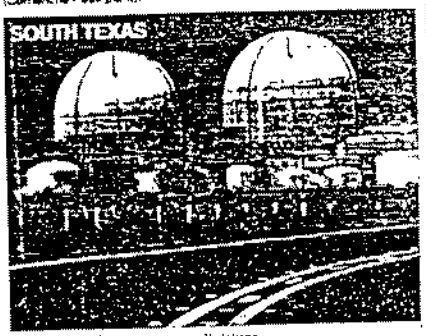
Saporito, whose whistle-blowing led to two security-related citations against HL&P last June, also had spoken to the NRC about the alleged fabrication of safety-related documents and a staggering maintenance backlog.

"They were generating (maintenance) work orders in excess of 1,000 a month," he said. "That's probably a month," he said. "That's probably 400 percent more than a normal nuclear plant would have. When you have that amount of equipment out of service, you have to ask yourself, 'Can the operators really mitigate an accident?'"

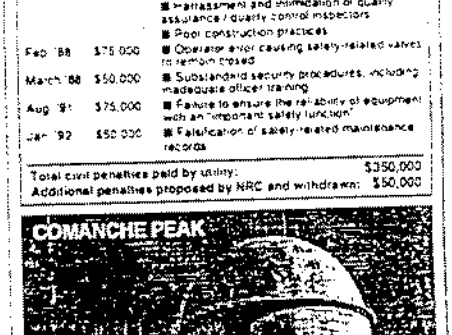
Monday: For whistle-blowers who believe they are victims of retaliation, the legal system can be emotionally and financially draining.

Penalties

Here is a list of civil penalties paid to the Nuclear Regulatory Commission by Houston Lighting & Power (South Texas plant) and by TU Electric (Comanche Peak plant).



Date	Fine	Violations
May '90	$100,000	■ Inadequacies in quality assurance / quality control programs for safety-related systems ■ Harassment and intimidation of quality assurance / quality control inspectors ■ Poor construction practices
Feb '88	$75,000	■ Operator error causing safety-related valves to remain closed
March '88	$50,000	■ Substandard security procedures, including inadequate officer training
Aug '91	$75,000	■ Failure to ensure the reliability of equipment with an "important safety function"
Jan '92	$50,000	■ Falsification of safety-related maintenance records
		$350,000
Total civil penalties paid by utility:		
Additional penalties proposed by NRC and withdrawn:		$50,000



Date	Fine	Violations
April '86	$40,000	■ Intimidation of quality control inspectors
June '86	$40,000*	■ Intimidation and harassment of quality control inspector
Jan '87	$250,000	■ Deficiencies in quality assurance / quality control programs ■ Failure to verify qualifications of some quality control inspectors ■ Failure to correct longstanding quality problems
Jan '90	$30,000	■ Failure to follow procedures regarding safety-related valves
June '90	$25,000	■ Creating the "perception" that a quality assurance inspector was fired for noting deficiencies
April '91	$50,000	■ "Widespread" falsification of fire watch patrol records
March '92	$25,000	■ Plant procedures resulting in misalignment of safety-related valves
Aug '92	$125,000	■ Operator error causing spent-fuel cooling pool to go without cooling for 17 hours ■ Improper response to error
		$585,000
Total civil penalties paid by utility:		
Additional penalties proposed by NRC and withdrawn:		$40,000

*Penalty of $120,000 initially proposed

Source: Nuclear Regulatory Commission

B.E. Green / Chronicle

Clampdown: The silencing of nuclear industry workers

Safety questions dog Comanche Peak plant

North-central Texas facility has history of intimidation

By JIM MORRIS
Houston Chronicle

GLEN ROSE — Not long before he died, Charles Atchison put into writing his fears about the Comanche Peak nuclear power plant.

"In the early stages," Atchison wrote in his distinctive scrawl, "I believed Comanche Peak would be another Three Mile Island. Now ... I see that I was wrong in that judgment (sic). It is my opinion that Comanche Peak will be a worst (sic) disaster than TMI."

Atchison was one of the original whistle-blowers to come out of Comanche Peak, a twin-reactor plant in the scrubby hills of north-central Texas with a long history of worker intimidation and harassment.

He was a quality-control inspector for Brown & Root Inc., general contractor at the plant, and presented his supervisors and the U.S. Nuclear Regulatory Commission with a list of painstakingly documented defects, most having to do with welds.

Atchison was fired in April 1982 after the NRC breached his confidentiality. On the day he left the plant, an NRC inspector identified him to TU Electric officials as "your alleger."

Atchison never found work in the nuclear industry again. A heavy smoker, he died of lung cancer at age 47 on Nov. 22, 1990.

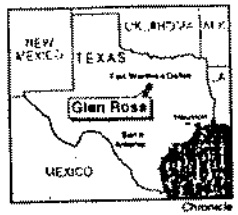
"He was never anti-nuclear," said Atchison's still-bitter widow, Joanne, who lives in Weatherford. "All he wanted them to do was build a safer, better plant."

Atchison's misspelled writings carry a special poignancy today, as plant owner TU Electric of Dallas prepares to begin generating power from Comanche Peak's Unit 2 and — utility officials hope — close the book on one of the most expensive and outlandish nuclear projects ever undertaken in this country.

As the NRC nears a vote on a full-power license for the plant, however, serious questions remain about Comanche Peak's safety and TU Electric's responsiveness to employee concerns.

Just this past May, the plant's spent-fuel pool went without cooling water for 17 hours, an accident discovered fortuitously by an NRC inspector before any real damage was done. The plant operators' response to the mishap was so inept that the NRC fined the utility $125,000.

Ron Jones, 48, a Brown & Root electrical inspector at Comanche Peak in 1983 and 1984, said that he wrote a "non-conformance" report on the very type of valve that malfunctioned and caused the pool to lose cooling.



Chronicle

During his time at the plant, Jones wrote more than 300 such reports, most having to do with faulty or worker-sabotaged wiring. He is convinced that most of the defects "were never addressed. Until they are, (accidents) will continually happen until you have a serious problem, such as a meltdown."

Jones was among the most outspoken of the early Comanche Peak whistle-blowers, a burly man from Benbrook who said he endured "death threats, threats to ruin me financially for awe" and other forms of harassment before and after he was laid off in 1984.

The threats stopped, Jones said, after he settled a lawsuit against Brown & Root in 1988 and stopped talking publicly about Comanche Peak. Unhappy with his settlement and the number of unresolved problems at the plant, Jones resurfaced as a whistle-blower last year.

Strange things began happening again. People began calling Jones' unlisted telephone number at all hours and hanging up. One night, around midnight, he put his trash out on the curb; it was gone, he said, "within two minutes."

Brown & Root spokeswoman Zelma Branch denied that the company retaliates against whistle-blowers.

"Our corporate policy is to investigate claims made by employees, and if there is merit we act on them ... without 'shooting the messenger,'" she said.

Said TU Electric spokesman David Fiorelli: "We ensure that each safety concern is fully investigated. We have programs to actively seek out employee concerns."

From 1986 to 1990, the utility paid three NRC fines, totaling $105,000, for retaliating or appearing to retaliate against whistle-blowers, including Atchison.

Pat Gwynn, deputy director of the Division of Reactor Projects at the NRC's Region IV office in Arlington, said that TU Electric managers have since become "very mindful of their responsibilities" to listen to employees and run a safe plant.

And yet unsettling events seem almost endemic to Comanche Peak.

In October, a contract female security guard was found unconscious, bound and gagged in the Unit 1 turbine building. Her gun and holster were found nearby, and "there was evidence of felony assault," according to an NRC report issued shortly after the incident.

The guard declined to press charges. TU Electric and the NRC conducted investigations, and in January the NRC issued its final report. It found no evidence that the woman had been assaulted, although it did not explain how or why the woman would have tied and gagged herself.

The NRC did find that the guard had alcohol in her system. It also cited TU Electric for a security-related violation and pointed out several flaws in the Comanche Peak security program, including a "high degree of frustration and low morale among the security officers" and a behavioral observation training program that focused heavily on drug and alcohol abuse and placed "little emphasis on aberrant behavior resulting from personality disorders or interpersonal conflicts."

Fiorelli said that TU Electric conducted additional training and took other corrective steps in response to the NRC's findings. The guard was denied further access to the plant.

After years of reacting stridently to public-interest groups and whistle-blowers, TU Electric officials seemed to adopt a new strategy in the late 1980s. In July 1988, the utility unexpectedly ended a long-running war with its main adversary, Dallas-based Citizens Association for Sound Energy (CASE), by paying $4.2 million to CASE and $3.5 million to a number of whistle-blowers. A planned continuation of Comanche Peak licensing hearings was canceled as part of the settlement, and CASE was given an oversight role at the plant for five years.

TU Electric's largesse didn't stop there. In February 1988, consultant Victor Gilinsky wrote a damning report about the utility for two of Comanche Peak's then-minority owners.

TU Electric managers "disregarded the generally followed approaches to designing and constructing nuclear power plants," wrote Gilinsky, a former NRC member. "By deliberately postponing key quality checks on design and construction until after the plans was built, the company set itself up for a 'balloon payment' in terms of safety inspection which it was unable to meet. Eventually, many errors in design, construction and rework were discovered."

Not long afterward, Gilinsky wound up on the TU Electric payroll as a consultant. A TU Electric document obtained from the Texas Public Utility Commission shows that Gilinsky had been paid $244,585 through December 1991.

Gilinsky said that he merely "gave advice" to TU Electric in a rate case and did not testify in its behalf, as he did for the former minority owners.

"I draw a sharp line between consulting and testifying," he said.

Asked if he believed that TU Electric had retained him primarily because he had been a Comanche Peak critic, Gilinsky said, "I did not feel that way. I felt that they got what they paid for."

Fiorelli of TU Electric said that Gilinsky was hired simply "to assist in the preparation of our rate case."

But Geoffrey Gay, an Austin attorney who has represented cities and consumer groups in TU Electric rate cases, believes that the utility's aim in the Gilinsky case and others was to "silence the opposition by paying them off."


E. Joseph Deering / Chronicle

Ed Tamlinson, 34, quit his job as a welder with Brown & Root at the Comanche Peak nuclear plant in February 1992 after being suspended for working on a valve without proper clearance. Tamlinson, who reported problems to Brown & Root, TU Electric and the U.S. Nuclear Regulatory Commission, is convinced that the utility and Brown & Root were waiting for him to "mess up."

Gay's description of Comanche Peak as a "heavenly" was validated by a number of former plant workers, several of whom left recently under unpleasant circumstances.

Ed Tamlinson, 34, of Granbury, quit his job as a welder with Brown & Root in February 1992 after mistakenly working on a valve with his partner, pipe fitter Ronnie Grant. Grant, 48, of Cresson, quit two weeks after Tamlinson.

The two men were given three-day suspensions for working without a proper "clearance," but they maintain today that the oversight was their supervisor's, not theirs.

Tamlinson had been a whistle-blower, reporting problems to Brown & Root, TU Electric and the NRC. He is convinced that the utility and Brown & Root were "waiting for me to mess up."

Brown & Root's Branch denied that Tamlinson or Grant were harassed.

One of Tamlinson's complaints dealt with lax enforcement of clearances. (A clearance indicates that a piece of equipment can be repaired without exposing workers to radiation or some other hazard.)

On March 17, 1992, a few weeks after Tamlinson left Comanche Peak, a Brown & Root worker mistakenly disassembled a "hot" valve in Unit 1. He was supposed to have worked on a similar valve in Unit 2, but had been taken to the wrong place by a TU Electric radiation protection technician.

"That incident could have been prevented," Tamlinson said. TU Electric was cited for it by the NRC.

Then there is Yvonne "Sam" Wilkinson, 38, of Granbury, whose case had nothing to do with safety.

The former Brown & Root telecommunications supervisor at Comanche Peak alerted TU Electric in 1989 to seemingly excessive phone charges — no less than $50,000 per month — by contractors and subcontractors. A short time later she was pulled from her skilled job and reduced to "ordering coffee supplies and maintaining Port-A-Johns."

"All of this was being billed to TU customers," Wilkinson said of the phone calls, many of which she determined to be personal. "The company was throwing money away."

Fiorelli said that Wilkinson's demotion "was probably a result of a personality conflict" which "we realize was a less-than-desirable reason to take a job action against an employee."

As for the alleged phone overcharges, Fiorelli said, "It was likely that there was some abuse of phone privileges, but we did not find a pattern of significant abuse."

Even among experts, fear of another Chernobyl persists

"We have to understand that no reactor is safe, that everybody is in danger."
— Dr. Vladimir M. Chernousenko, Ukrainian physicist who led a scientific task force that investigated the 1986 Chernobyl disaster.

Realistically? It's not going to happen."
— A. David Rossin, president of the American Nuclear Society, when asked whether a Chernobyl-size accident could occur in the United States.

BY JIM MORRIS
Houston Chronicle

In broken English, Vladimir Chernousenko recited the casualty figures.

"One hundred fifty of my friends are dead," the ailing nuclear physicist said by telephone from Germany. "Twelve thousand people, total, have died. Three hundred thousand are alive but very ill. Men, women, children — very sick, all these people. For them this disaster is only now beginning."

Chernousenko was talking about the accident at the Chernobyl nuclear power plant in Ukraine nearly seven years ago. Block 4 of the reactor exploded at 1:23 a.m. on April 26, 1986, sending clouds of radiation thousands of miles over Europe and a lethal "black rain" over nearby cities and villages.

By Chernousenko's reckoning, 35 million people received some amount of radiation from Chernobyl, and land within a 300-mile radius of the reactor remains contaminated.

The 51-year-old scientist stoically admits to "not feeling very well" himself. He spent seven months in the Special Zone — within a 6-mile radius of the wrecked plant — immediately after the accident and absorbed 650 whole-body rems. (A point of reference: If 100 people are exposed to 500 whole-body rems, 50 will die quickly and the other 50 can be expected to die in six or seven years).

Chernousenko writes chillingly of his experience and advances strong opinions about nuclear power in his new book, *Chernobyl: Insight from the Inside.*

Associated Press

Ukrainian physicist Dr. Vladimir M. Chernousenko led a scientific task force that investigated the 1986 Chernobyl nuclear plant disaster. Chernousenko, who has written a book on Chernobyl, says that no nuclear reactor is safe.

"It is certainly true," he writes, "that a nuclear power station working safely without any accident is ecologically one of the cleanest of all industrial plants. However, a single accident, like the one at Chernobyl, can negate all advantages for centuries to come."

Chernobyl is, and may always be, the standard by which nuclear accidents or near-accidents are measured. But could such a thing happen in the United States, where the 110th nuclear power reactor — Comanche Peak Unit 2 — is about to come on line?

"That has been a matter of significant evaluation by us almost from the day we heard about the accident," said John Taylor, vice president for nuclear power at the Electric Power Research Institute, a utility-sponsored organization in Palo Alto, Calif. The conclusion that Taylor and his colleagues reached was "no" — for three main reasons.

First, Taylor said, the Chernobyl reactor lacked a containment — the thick concrete shell designed to keep radiation from escaping into the environment. Second, it was designed not only to produce power but to produce weapons material (plutonium), thereby compromising its stability. And third, a design flaw caused the reactor to heat up, rather than cool down, when the explosion occurred.

A. David Rossin, a San Francisco energy consultant and president of the American Nuclear Society, said that Chernobyl and similar plants in the former Soviet Union were run under a "weapons mentality: 'We know best. Don't question us.' "

In contrast, he said, an operator at a U.S. nuclear plant is free to take a safety concern up the utility management chain. "Last ditch, he could hit the shutdown button and explain why he did it," Rossin said.

For this reason and others, he said, Chernobyl "will not happen here."

Some, however, are less sure.

Four months after Chernobyl, the U.S. Nuclear Regulatory Commission released its Policy Statement on Safety Goals for nuclear reactors, a document "based on the principle that nuclear risks should not be a significant addition to other societal risks."

In an addendum to that statement, then-Commissioner James Asselstine wrote that "we cannot rule out core meltdown accidents in the foreseeable future, given the current level of safety . . ."

A year earlier, the NRC staff had estimated that there was a 45-percent chance of a core-melt accident — not necessarily culminating in a radiation release — by the end of the century.

Michio Kaku, a professor of nuclear physics at the City University of New York and a protege of Edward Teller, the "father of the hydrogen bomb," noted that Teller "is on record as saying that nuclear plants don't belong on the surface of the earth. They should be 500 feet underground instead."

At Chernobyl, Kaku said, "only 5 to 10 percent of the core came out. You can imagine what would happen if 70 percent came out."

The U.S. government has done four major studies of nuclear accident scenarios. Two were attempts to quantify the consequences of an accident without addressing the likelihood that such an accident would occur. They were:

■ A 1957 report known by its filing name: WASH-740. This document, prepared by the now-defunct Atomic Energy Commission (the NRC's predecessor) and kept secret for years, estimated that a major release of radiation from a 100- to 200-megawatt reactor (one-fifth to one-tenth the size of today's reactors) could in the "worst case" kill 3,400 people and injure 43,000. Property damage, the report said, could reach $7 billion.

■ A plant-specific, 1982 report prepared by Sandia National Laboratories in Albuquerque for the NRC. Researchers assumed for each plant a "core melt accident in which all installed safety equipment fails and the reactor containment structure is breached directly to the atmosphere."

Such an accident at Unit 1 of the South Texas plant, the report said, could result in as many as 18,000 "early" (within a year of exposure) deaths from radiation, 10,000 early injuries, 4,000 cancer deaths and $112 billion in direct costs (not including costs associated with health care and litigation).

The figures for Comanche Peak Unit 1. As many as 1,200 early deaths, 14,000 early injuries, 4,800 cancer deaths and $117 billion in direct costs.

The other two federal studies were full-scale risk assessments — that is, they looked at the likelihood of accidents as well as the possible consequences. They were:

■ The 1975 WASH-1400 study by the NRC. Using a core-melt/containment breach accident at the Surry plant in Virginia as their premise, researchers made estimates of 3,300 early deaths from radiation, 45,000 early injuries, 45,000 cancer deaths and property damage as high as $14 billion.

The frequency of such an accident occurring at a given plant was estimated to be one in a billion in a given year. The chance of a core-melt accident without a containment breach — and, presumably, with few casualties — was put at one in 20,000.

■ An update of WASH-1400, completed in 1990. This study, known as Nureg 1150, is the most comprehensive and reliable to date, according to the NRC.

Nureg 1150 looked at hypothetical accidents at five plants: Surry, Zion in Illinois, Sequoyah in Tennessee, Peach Bottom in Pennsylvania and Grand Gulf in Mississippi.

For three of the reactors — Surry, Zion and Sequoyah — it was determined that the likelihood of a non-catastrophic, core-melt accident was one in 30,000; for the other two, which are designed differently, it was one in 200,000. The chance of a containment breach at any of the plants was calculated to be one in a million.

The prediction was that a large release from the Surry plant — the same one examined in WASH-1400 — would result in 200 early deaths and 30,000 cancer deaths. No attempts were made to quantify injuries or property damage.

The current NRC thinking, then, is that a severe accident is less likely to happen and would have less serious consequences than what the experts believed 20 years ago. And industry officials say they are confident that nuclear power is a good deal safer than even Nureg 1150 suggests.

Carl Goldstein, a vice president with the U.S. Council for Energy Awareness, a nuclear trade association in Washington, D.C., said that the 1979 accident at the Three Mile Island plant in Pennsylvania "was probably as bad an accident as we can experience in the United States.

"Three Mile Island was plenty serious, it damned near destroyed a utility company (owner General Public Utilities Corp.)," Goldstein said. "It represented a severe financial loss for that company, and it caused a lot of fright among the public. But it caused no injury or death."

The accident — a product of human error and equipment malfunction that allowed the reactor's core temperature to soar — has cost General Public Utilities and its insurers about $1 billion, Goldstein said. That's $6.6 billion less than the total amount for which the utility could be liable under the 1957 Price-Anderson Act.

"Despite severe fuel melting the pressure vessel held, the containment held," at Three Mile Island, Goldstein said. "Very little radiation got out."

Not everyone believes that. Jane Lee, who lives on a farm in Fairview Township, Pa., about 3½ miles northwest of the plant, conducted surveys in the 1980s that she believes prove an excess of cancer. On one hill about a mile southwest of Three Mile Island, Lee said, she found a cancer rate 600 percent above normal.

"We wanted to make sure we weren't being selective, so we went to another area — also a hill, but about six or seven miles away," she said. "We found similar figures."

Lee, 69, did a complete health survey in a subdivision of 500 homes and "found a lot of cancers and a lot of other things. I found a woman who had lesions all over her body. She was a high school student at the time (of the accident) and had been out on the street two days after it happened. She looked like an atom bomb victim."

New HL&P executive once mired in Tennessee nuclear fiasco

By JIM MORRIS
Houston Chronicle

The man being brought in to revive Houston Lighting & Power's ailing nuclear program was in the thick of a nuclear fiasco in Tennessee in the 1980s.

William Cottle, 47, who replaces Donald Hall as HL&P's group vice president-nuclear on April 5, shared responsibility for the federal Tennessee Valley Authority's notorious and still-unopened Watts Bar plant from 1982 to 1985.

During Cottle's tenure as site director at Watts Bar, which has been under construction a record 21 years, hundreds of workers alleged that they had been intimidated and harassed for reporting safety problems. The plant even today leads the nation in the number of whistleblower discrimination complaints pending before the U.S. Department of Labor.

Cottle left the TVA in 1987 for Entergy Operations Inc. of Jackson, Miss., and in 1988 was put in charge of the Grand Gulf nuclear plant in Port Gibson, Miss.


Cottle

When Cottle's departure from Entergy was announced in mid-March, company President and Chief Executive Officer Donald Hintz said that "We will miss Bill's leadership and are very proud of the many contributions he made at Grand Gulf . . ."

"The thing I'm proudest of is having built a management team (at Grand Gulf) that has good, high standards . . . ," Cottle said last week.

Of whistle-blowers, he said: "I have always . . . been willing to meet with any employee and do my best to understand their concern."

Several current and former Watts Bar employees, however, said they saw another side of Cottle.

"He was one of the dictators," said Ann Harris, a TVA contract and procurement specialist who has worked at Watts Bar since 1982. "His management style was, 'Do as I say, not as I do.' "

Cottle had left Watts Bar and become assistant to the TVA manager of nuclear power when the utility fired Quality Technology Co. (QTC) in March 1986. The TVA hired QTC in May 1985 to receive and investigate employee concerns that were delaying licensing of Watts Bar.

The TVA required all plant employees to speak with QTC. Chip Hill, a former QTC supervisor, said that at least half of the nearly 6,000 workers wanted to discuss potential safety problems — a very high percentage, in his experience.

"We had put this program together to get TVA out of the slammer, so to speak," Hill said. "Cottle had been supportive of that, at least on the surface, but it later became questionable whether he ever had supported anything."

At a 1990 Labor Department hearing on a discrimination complaint filed by 24 ex-QTC employees, Cottle was asked if, in 1985, he had called QTC a "cancer" that was "spreading" and "might be fatal to TVA's nuclear program." Cottle conceded that was "reasonably accurate."

Cottle told the Chronicle that he did not recall making the remark and had nothing to do with QTC's dismissal.

Cottle was involved in at least one other controversy at Watts Bar. In 1983, a plant security guard found a half-empty bottle of gin in a car Cottle was driving off site.

Cottle denied that the liquor was his or that he had consumed any of it, but the security guard, John Gang, reported the incident, nonetheless. A week later Gang quit after being reassigned to a mothballed nuclear plant 300 miles away in Mississippi.

Gang said that the TVA was cracking down on employee drinking at the time and he was only doing his job.

"I remember . . . (Cottle) said, 'Do you know who I am?' I didn't know who he was. He said he was over the nuclear plant.

"My captain told me not to write up Mr. Cottle, but at the time they were firing construction workers for having 5-year-old, rusted beer cans in the beds of their pickups, and I didn't think that was right. No alcohol was allowed on TVA property whatsoever. I felt like the guy (Cottle) was over the place, he should have known the rules."

Cottle said last week that he had nothing to do with the guard's reassignment.

Nuclear safety concerns

A partial list of major, unresolved issues that apply to some or all nuclear reactors:

Thermo-Lag

Thermo-Lag is a fire barrier used in more than three-quarters of the U.S. nuclear power reactors, primarily to protect safety-related electrical cables. The need for such protection was established by the NRC after a near-catastrophic fire at the Browns Ferry plant in Alabama in 1975. Utilities began seeking NRC permission to install Thermo-Lag, manufactured by Thermal Science Inc. of St. Louis, in 1981.

Although tests of Thermo-Lag had not been properly performed by Thermal Science, the NRC permitted utilities to use the tests as justification for installing the material. Subsequent tests performed by Gulf States Utilities at the River Bend plant and TU Electric at Comanche Peak indicated that Thermo-Lag might not survive as long as it is supposed to during a fire and might cause cables to age more quickly.

The NRC's Office of Inspector General determined last year that the NRC knew in 1982 of questions about Thermo-Lag's ability to "perform as claimed by the manufacturer." The NRC, however, "did not effectively respond to these indicators."

As an outgrowth of the inspector general's investigation, which is continuing, a federal grand jury in Baltimore issued subpoenas to utilities in February seeking documentation on Thermo-Lag. The grand jury is said to be looking at whether Thermal Science misrepresented the barrier's capabilities to utilities and whether utilities knew the barrier was unproven before they installed it.

At a March 3 hearing before a House subcommittee, NRC Chairman Ivan Selin said that his agency and utilities must share the blame for inaction on Thermo-Lag.

"There appears to have been a widespread failure" of utility quality-assurance programs "with respect to fire protection," Selin said. "The NRC's slowness in recognizing the situation has effectively delayed us in holding the utilities to their responsibilities or from applying timely enforcement."

Ashok Thadani, director of the NRC's Division of Systems Safety and Analysis, said that further tests of Thermo-Lag in a variety of configurations will be conducted this spring. Depending on the results, he said, some utilities may have to make modifications. In the meantime, utilities will continue to send roving fire patrols into areas where Thermo-Lag is present.

Michael Mariotte, executive director of the Nuclear Information and Resource Service, said that the NRC should force utilities to remove Thermo-Lag immediately.

"If there were a fire and this stuff melted through — especially if it melted quickly — a cable could burn or short-circuit," said Mariotte, whose group brought the issue to light last summer. "You could lose control of the reactor and it could melt down."

Steam generator tubes

A steam generator contains thousands of tubes, not unlike heating elements in an oven. Hot, radioactive water from the reactor core is pumped under great pressure into the tubes.

Non-radioactive water contacts the outside of the heated tubes and steam is created. The steam drives the turbines that produce electricity.

The tubes have shown a tendency to leak. If enough of them leak over an extended period, the reactor could lose coolant and the core could melt. The same thing could occur if tubes burst.

An internal NRC memorandum in September indicated that the risk of a meltdown from multiple tube leakage or rupture at the Trojan plant in Oregon was 300 times more likely than the NRC's safety goal. The memo had been written by an NRC staff member in opposition to an NRC-approved waiver that allowed Trojan to operate with 428 bad tubes.

Robert Pollard, a former NRC official and now a nuclear safety engineer with the Union of Concerned Scientists, obtained the memo and made it public in November.

In January, Portland General Electric Co., owner of Trojan, announced that it would close the plant rather than spend an estimated $200 million to replace its steam generator.

Tube leakage is a potential problem in all pressurized water reactors, including South Texas and Comanche Peak. In a 1988 speech, NRC Commissioner Kenneth Rogers described it as a "loaded gun, an accident waiting to happen."

Rogers was prescient. On March 14 a steam generator tube burst at the Palo Verde plant in Arizona, sending an undetermined amount of radioactive gas into the environment and keeping the plant on alert for nearly 21 hours.

Some utilities, however, have asked the NRC to let them operate plants without plugging substandard tubes.

"It's an issue we are looking at very carefully," said the NRC's Thadani. "We're analyzing different scenarios to see what kinds of leaks can lead to what kinds of consequences."

Station blackout

This alarming phenomenon can occur at a nuclear plant when both the main and backup power sources fail.

"The concern," Thadani said, "is that if you lose all offsite power and all onsite power for extended periods of time, you may not have the ability to cool the (reactor) core. If this goes on for many, many hours the potential exists for damage at the core."

Perhaps the most dramatic example of station blackout occurred at Georgia Power Co.'s Plant Vogtle near Augusta, Ga., in March 1990.

A backup diesel generator failed after the plant's main power supply was knocked out by a truck that struck a pole.

A second backup generator was out of service for maintenance at the time. The result was a 36-minute blackout, during which the temperature of cooling water in the reactor rose 46 degrees.

A federal grand jury in Atlanta is investigating whether Georgia Power officials lied to the NRC about the reliability of the backup generator that failed.

The allegation was made by Allan Mosbaugh, a former manager and whistle-blower at the plant who has a Department of Labor discrimination case pending against the utility.

Mosbaugh called the 1990 accident "fairly serious. If they'd been unable to restore diesel power I'd say they would have had core damage in 10 hours."

The South Texas plant, as it happens, has had problems with backup diesel generators.

The NRC issued a special rule in 1988 requiring utilities to show that they could cope with station blackout for certain periods of time — four hours, on average — or if they couldn't, to show that they had an alternate source of power, Thadani said.

The NRC has since done safety evaluations of most plants. Some will have to make minor modifications and some major ones, Thadani said.

All of the modifications are expected to be completed by 1996, he said.

Allegations center on coziness between regulators, regulated

By JIM MORRIS
Houston Chronicle

The Nuclear Regulatory Commission's much-maligned Region IV office in Arlington is trying to recover from charges that its relationship with utilities is incestuous.

Recent allegations raised by whistle-blowers at the South Texas nuclear power plant have focused on the activities of Region IV security inspector Bruce Earnest and former investigator Don Driskill, who is now at Region V in California.

Earnest was accused of going easy on South Texas because of his close friendship with Bill Randlett, the plant's security manager from 1987 to 1992. Earnest had served under Randlett in the Army from 1979 to 1981.

Driskill was accused of breaching the confidentiality of a South Texas whistle-blower and of mishandling allegations. His name also has been mentioned derisively by whistle-blowers at the Comanche Peak plant in North Texas and the Palo Verde plant in Arizona.

A confidential report issued by the NRC's Office of Inspector General in 1991 and obtained by the Houston Chronicle suggests that both Earnest and Driskill at least gave the impression that they were not doing their jobs aggressively and independently. The inspector general also found that Driskill failed to properly handle allegations against Earnest.

The inspector general's report says that the friendship between Earnest and Randlett "created the perception to a number of (South Texas) security staff members that Earnest had lost complete independence and that Randlett was receiving preferential treatment . . . (C)ertain events took place which created a perception among a number of STP employees that security violations were pursued (by Earnest) in a less than aggressive manner."

Randlett, now a senior security specialist with Carolina Power & Light Co. in Raleigh, N.C., said Earnest's work "in no way" was influenced by the relationship.

Earnest agreed. "If my mother worked at a nuclear plant, I'd write her up if she screwed up," he said. "I drove them (HL&P) into the ground like a fence post a couple of times."

The inspector general's report notes that there was a steep decline in the number of violations cited by Earnest after Randlett arrived at South Texas in 1987. Earnest said this was because Randlett "turned the (security) program around."

Still, an NRC security inspection in August 1991 confirmed, at least in part, that Earnest made "decisions . . . not to log certain events that members of the NRC staff believed to be reportable and . . . initiat(ed) guidelines that staff believed were in violation of NRC regulations," the report says.

Jim Neal, who left the South Texas security department under pressure in March 1992, recalled a time when Earnest was in Randlett's office. Neal walked in to discuss an "access control" problem that he felt was reportable to the NRC.

Earnest "asked a couple of questions, and said, 'Oh, no, that's not reportable,' " Neal said. A few months later, he said, HL&P was cited by the NRC for not reporting the problem.

Earnest said he did not remember the incident but doubted it happened the way Neal described it.

The inspector general's report concludes that Driskill did not reveal the identity of former South Texas security official and whistle-blower David Lamb, as Lamb charged.

It does say, however, that Driskill failed to refer allegations against Earnest to the inspector general's office, as he should have.

Also, Driskill "never officially recorded" Lamb's security allegations and did not keep Lamb apprised of the disposition of those allegations, although entries made into the NRC's computer tracking system indicated otherwise.

Greg Cook, spokesman for the NRC's Region V, said Driskill had no comment on events that took place while he was at Region IV.

Clampdown: The silencing of nuclear industry workers

Inspector paid dear price for criticizing NRC

Kelly claims candor stirred ire of agency

By JIM MORRIS
Houston Chronicle

E. Joseph Deering / Chronicle

Nuclear Regulatory Commission inspector James Kelly retired under duress in 1990 after taking his agency to task in a congressional hearing 2½ years earlier.

On June 11, 1987, a Nuclear Regulatory Commission inspector from Texas sat across from a House subcommittee in Washington and, in typically blunt fashion, took his agency to task.

The subject was drug and alcohol abuse at nuclear power plants. The witness was James Kelly, then a senior security inspector with the NRC's Region IV office in Arlington.

After reviewing his qualifications — seven years with the NRC, a master's degree in criminology, a former assistant director of the International Association of Chiefs of Police — Kelly came to the meat of his statement.

"The NRC," he testified, "has left to the nuclear industry the responsibility for insuring that personal problems of drug and alcohol abuse do not impact personnel who operate and maintain nuclear power plants or who otherwise have access to vital areas of these plants. A few utilities have vigorously and courageously addressed the problem, but for the most part the utilities are not up to the task. The NRC, for its part, has rarely investigated allegations of drug and alcohol problems."

Kelly would pay dearly for his candor. Within three months, he was under investigation by the NRC's Office of Inspector and Auditor (since replaced by the Office of Inspector General). The charge was that he had improperly solicited employment with Houston Lighting & Power Co., part owner of the South Texas nuclear plant, over which Kelly had inspection authority.

After a 2½-year struggle with his own agency, Kelly retired under duress in March 1990. Now 58 and living in the Dallas suburb of Euless, he heads a small corporate investigations firm but makes considerably less money than he did with the NRC. He has a federal lawsuit pending against six current and former NRC officials — including former Executive Director Victor Stello — who, he alleges, deprived him of his rights to "continued employment" with the NRC and an "untarnished government service record."

"I was a pain in the ass" to the NRC, Kelly said recently. He believes that he was castigated because he gave his congressional testimony voluntarily — not under subpoena, as his superiors wanted — and dealt with a "sensitive subject. Some of our own management people were victims of alcohol abuse."

High-ranking NRC officials maintain to this day that the Kelly investigation was legitimate and not politically motivated. But a 1990 NRC inspector general's report obtained by the Houston Chronicle found that the investigation had been "inaccurate" and "incomplete" for several reasons, not the least of which was that "two key witnesses were never asked whether Kelly appeared to be soliciting employment." These witnesses later told the inspector general that Kelly had given no such appearance.

The inspector general's office was unable to "prove" retaliation against Kelly for his strong remarks before the subcommittee. But it found evidence that the investigation of Kelly, his supervisor and a co-worker in Region IV had been directed from the top of the NRC.

At the very least, the report says, there was a "perception" of "vindictiveness" on the part of Stello and his subordinates — namely, that they launched the investigation to punish Kelly for his testimony and all three Region IV employees for enforcing security regulations too aggressively at South Texas.

Jerome Goldberg, then vice president of HL&P's nuclear group, had met with Stello in January 1987 to voice "his concern about the slow pace of the NRC review of the (South Texas) security plan," the report notes, and other HL&P managers had subsequently complained to regional NRC officials about the same thing.

"When asked about his role in the (Kelly) matter . . . Stello represented that he had no involvement in the investigation," the report says. "That representation is not credible based on persuasive evidence to the contrary developed during our review."

Stello, now a deputy assistant secretary for facilities with the U.S. Department of Energy, did not return telephone calls to his office.

James Taylor, who had a major role in the Kelly investigation as Stello's deputy, said in an interview that Kelly was not "targeted" because of his testimony or his hardline stance on South Texas.

"We let any employee stand up anywhere," said Taylor, who replaced Stello as NRC executive director. "They can talk in any forum."

But Kelly said that "the heat came down right away from Washington" after he testified. He denied that he ever solicited employment with HL&P and said the charge was "fabricated."

As a result of the investigation by the Office of Inspector and Auditor, Kelly's supervisor, Lawrence Yandell, and a fellow inspector, Ronald Caldwell, were given letters of reprimand in April 1989. Kelly was given a 15-day suspension in June of that year, an action that led to an arbitration hearing in December. At the end of the hearing Kelly agreed to resign if the NRC would rescind his suspension, expunge it from his personnel record and pay him back wages.

Walter Dresslar, a staff attorney with the National Treasury Employees Union in Austin, represented the Region IV men. He said that the investigation "was nothing less than retaliation for doing their job at South Texas. They were continually being pressured by the HL&P people, through the NRC, to certify things as being OK when they weren't. They picked up on a lot of problems (at South Texas) and, in my opinion, they were being called down for them. They were being accused of overregulation."

Kelly said the management style in Region IV was "intimidating" and "demoralizing." He likened it to a "Central American military dictatorship."

Inspectors "were hesitant to write violations," Kelly said, "and when they did write violations they were frequently intimidated to the point where they were afraid to stand up and defend the violations."

In a transcribed interview with the NRC in 1988, not long after he had joined the Tennessee Valley Authority, former Region IV official Richard Denise said that the region did not have a "strong enforcement program, and I believe that a lack of a strong enforcement program has its roots in the attitudes of the senior managers."

Denise said that managers were unwilling "to provide help to inspectors in the plants. If you don't inspect, you will not find any violations." Frequently "the inspector would be discouraged from writing notices of violation because he had to jump through so many hoops to get it out."

Region IV, it should be noted, has undergone management changes since Kelly and Denise left. The current regional administrator, James Milhoan, said: "I certainly encourage our inspectors to be fair in their inspections and to address violations where violations do occur. I think we have a good reputation."

NRC Inspector General David Williams said that "we have a high level of confidence" in Milhoan.

Kelly, however, doubts that Region IV has undergone a complete reformation.

"The people who manage (the NRC) are engineers," he said. "They are the same breed as the people who run the power plants. An engineer uses blueprints to do construction and put systems into effect. There's a frustration on their part in having to deal with people problems that come along — people that steal, get drunk, don't follow the blueprints. That doesn't fit the engineering mentality."