

# **Fitness for Duty Problems at Three Mile Island: 1978-2008**

- **December, 1978** - Unit 2 goes online. Allegations filed with NRC staff about the falsification of leak rate data prior to Accident.
- **May 22, 1979** - Former control room operator Harold W. Hartman, Jr. tells Nuclear Regulatory Commission (NRC) investigators that Metropolitan Edison- General Public Utilities (GPU) had been falsifying primary-coolant, leak rate data for months prior to the accident. At least two members of management were aware of the practice. NRC investigators do not follow-up or report the allegations to the Commission (See February 29, 1984, for first-ever criminal conviction of a nuclear utility for violating the Atomic Energy Act.)
- **March 6, 1980** - NRC Commissioners direct that 13 “specific” “management” issues be examined by the ASLB.
- **April, 1980** - The NRC refers leak rate falsification allegations to the Justice Department ) which begins a Grand Jury investigation.
- **In September, 1980** - Met Ed renamed itself GPU Nuclear in a bid to disassociate itself from itself.
- **October 2, 1981** - Restart hearing reopened on operating cheating, and conclude December 10, 1981.
- **On April 28, 1982** - The Special Master’s report found TMI managers engaged in cheating and wrongdoing; the company’s response and integrity were inadequate; the company submitted “material false statements,” (GPU fined \$140,000 on July 22, 1983) and the company’s training program ineffective and inadequate. On July 27, 1982 a Partial Initial Decision (PID) reversed the Special Master and was appealed.
- **March 22, March 27, and April 2, 1983** - Three senior level plant employees, Richard Parks, Larry King, and Edwin Gischel, charge GPU and Bechtel with harassment, intimidation and circumvention of cleanup safety procedures.
- **April 26, 1983** - The NRC staff explains that the basis for the need to “revalidate” GPU’s management was the “open issue of the Hartman allegations concerning the falsification of leak data,” which could “possibly affect the staff’s position on management integrity.”

- **May 5, 1983** - GPU reveals for the first time to the NRC that management audits concluded by BETA and RHR, completed in February and March, 1983, were critical of plant operations and management.

- **May 19, 1983** - The NRC staff withdraws its support of GPU, but reverses itself on July 26, 1984.

- **June 2, 1983** - Governor Thornburgh urged the NRC not to make a final decision on restart until the State's appeal of all issues are concluded. Eight days later GPU writes to the Governor and proposes to reorganize some personnel, and promises not to let those individuals who cheated on exams operate Unit 1. Thornburgh drops the Commonwealth's appeal on the "cheating" issue, and suggested GPU's proposal is a "good start" towards satisfying his concerns.

- ✓ **July 22, 1983** - GPU is fined \$140,000 for submitting material false statements to the NRC in connection with the license certification of then TMI-2 Supervisor of operations who cheated on his license requalification exam in 1979 (See June 15, 1984).

- ✓ **July 22, 1983** - GPU is fined \$140,000 for submitting material false statements to the NRC in connection with the license certification of then TMI-2 Supervisor of operations who cheated on his license requalification exam IN 1979 (See June 15, 1984.)

- ✓ **November 7, 1983** - The Department of Justice indicts Met Ed for falsifying leak rate data and destroying documents before the accident, in violation of their license, NRC regulations, and the federal criminal code.

- ✓ **February 29, 1984** - A plea bargain between the Department of Justice and Met Ed settled the Unit 2 leak rate falsification case. Met Ed plead guilty to one count, and no contest to six counts of an 11 count indictment.

The Company also agreed to pay a \$45,000 fine, and establish a \$1 million dollar interest-bearing account to be used by the Pennsylvania Emergency Management Agency. The Settlement stipulated that the fines, emergency preparedness fund, and legal cost of the prosecution, would not be paid by GPU/Met Ed rate share holders. (See May 22, 1979, for initial complaint.)

- ✓ **April 11, 1984** - William Pennsylv settled out-of-court two days before an administrative law judge was scheduled to hear his case relating to GPU's refusal to allow Pennsylv to wear a respirator during cleanup activities.

- ✓ **June 15, 1984** - James Floyd, former TMI-2 Supervisor of operations, is indicted by a federal grand jury for cheating on 1979 licensing exams, and for causing two material false statements to be submitted to the NRC in connection

with his license certification (See November 6, 1984 and January 2, 1985, for related developments.)

✓ **November 8, 1984** - The NRC notified Congress that the Justice Department has begun a federal grand jury investigation of the NRC staff.

✓ November 16, 1984 - Former TMI Supervisor James Floyd is convicted in federal court of cheating on NRC operator exams in 1979.

✓ **December, 1984** - Former NRC Investigator David Gamble testified at NRC hearings that the NRC's investigation as to whether Met Ed-GPU officials withheld information during the accident was deliberate, incomplete and inaccurate. Gamble added the NRC's conclusion exonerating the Company was not supported by facts.

✓ **December 19, 1984** - Hearings begin on second remanded issues: training since 1981 cheating scandal.

✓ **August 12, 1985** - GPU and Bechtel were fined \$64,000 for cleanup worker allegations first reported on March 22, 1983.

✓ **March 29, 1987** - A contractor employee was arrested and charged with criminal mischief for releasing halogen gas on the ground floor of the Unit-2 control building. The employee wanted to leave work early. Total damage from the incident was approximately \$50,000.

✓ **May, 1987** - A non-licensed plant employee was found **sleeping** in the Unit-2 radioactive waste control room.

✓ **December 1, 1987** - GPU announced the firing of a TMI-2 shift supervisor for **sleeping** on the job. Although the employee had a record of sleeping on the job dating back to the early 1980s, GPU did not issue a warning until October 1986.

Edwin Stier, former Director of the New Jersey Division of Criminal Justice, reported that 21 witnesses saw the shift supervisor asleep on the job.

✓ June 15, 1987 - Ten employees working at TMI-1 & TMI-2 tested positive for drugs; eight individuals were suspended for 30 days without pay and one resigned. Since March 1986, sixteen employees have tested positive for drugs, and on August 18, 1996: "A contractor supervisor [Raytheon Nuclear] at GPU Nuclear Corp.'s Three Mile Island (TMI) tested positive for a controlled substance last week and was escorted from the site" (*Inside the NRC.*)

✓ February, 1988 - GPU was cited by the NRC for failing to deploy a roving fire watch "when the Halon system for a the cable and transformer rooms

became inoperable

√ **July 19, 1988** - The operator of the Reactor Building polar crane was found **sleeping** at his station.

√ **July 19, 1988** - A worker was found **asleep** in the Unit-2 Contamination Control Crucible.

√ **August 3, 1988** - A worker was found **sleeping** in the Unit-2 auxiliary building.

√ August 31, 1988 - A Unit-2 operator was fired after an 11 day investigation, including a medical probe, “showed the licensed operator, who was not identified, had been drinking and taking drugs either before or after he reported to work or while he was at work.” (See June 15, 1987, for related drug problems.)

√ September 21, 1989 - At the TMI Advisory Panel Meeting, Dr. Michael Masnik of the NRC informed the Panel that “the NRC Office of Investigations report on the subject of management involvement in the inattentiveness issue at TMI-2 has been referred to the Justice Department and is under evaluation at this time.” Dr. Masnik also acknowledged that the NRC believes there is “...wrongdoing on the part of the licensee...”

√ **September 23, 1989** - A TMI-2 operator was found reading “unauthorized material”, i.e. a “girly” magazine (See September 1991 and April 21, 2001, for related incidents.)

√ **October 11, 1989** - A polar crane operator was found “**reclining** on the walkway with his feet draped over the handrail, eyes closed and head nodding.”

√ November 1, 1989 - One of two workers involved in a radiation exposure “incident” may have received 220 rems to the hands, i.e., “extremities.” The other worker in the incident is projected to have received 35 rems of exposure. The incident began when the workers picked up an object they thought was a “nut” or “bolt”, but was in fact a piece of highly radioactive fuel. The workers were then advised to throw the “object into the reactor vessel.” Since the fuel was “discarded”, GPU had to use models to predict dose calculations and exposure rates.

GPU was also in violation for failing to report this incident in a timely fashion. Additionally, the workers have reported contradictory statements about the event (See September 25 and November 28, 1989, for recent worker exposures.)

√ November 28, 1989 - Another exposure incident occurred at TMI-2 when

a worker, who was wearing protective clothing, took the object [a 40-foot poll] and began wiping it with a towel...the worker was holding a radiation monitor and noticed after a few seconds that the object was highly radioactive..." GPU termed this incident an "unplanned exposure" [below one rem] and not an overexposure. (See September 25 and November 1, 1989, for recent worker exposures.)

√ January 13, 1990 - GPU was fined \$50,000 for excessive radiation exposure to a worker. (See September 25 and November 1 and 28, 1989, for background information.)

√ July 31, 1990 - The NRC announced "that an allegation that a shift supervisor on duty at Three Mile Unit 2 control room, during defueling operations in 1987, had sometimes **slept** on shift or had been otherwise inattentive to his duties, was true.

"Although some key members of the site management staff were aware of the **sleeping** problems and some actions were taken to correct it, it [sic] was not effectively corrected until utility corporate management became involved. The NRC staff proposes to fine GPU Nuclear, Inc. (GPUN) the company that operates the TMI site, \$50,000. The staff also proposes a Notice of Violation to the former shift supervisor."

For **related sleeping problems** refer to May 1987 and December 1, 1987; July 19 and August 3, 1988; and, October 11, 1989.

√ **February 1991** - An operator "inadvertently flooded the vaporizer" and several days later an operator was discovered "apparently **sleeping**."

√ **September, 1991** - Standley H. Hoch Chairman and CEO of GPU, was forced to resign after it was disclosed he was having an **affair** with Susan Schepman, vice president of communications.

√ **February 7, 1993** - Unauthorized Forced Entry into the Protected Area at Three Mile Island Unit-1. An intruder drove past TMI's guarded entrance gate, crashed through a protected area fence, crashed through the turbine building roll-up door, and hid in a darkened basement of the plant for almost four hours before being apprehended by guards.

√ **February 11, 1993** - The NRC's top safety official Thomas Murley wasn't sure if any regulations had been violated during the incident at TMI. Nineteen days later, Samuel Collins head of the NRC's investigation team announced, "An individual can challenge the security events that currently exist.

√ **October 15, 1993** - In response to (IN) 92-30, "Falsification of Plant Records," a generic NRC initiative, the NRC "is concerned about the apparent misconduct on the part of the plant individual involved with this record. Because the NRC must be able to rely on the professionalism and integrity of personnel who perform safety-related activities, including log taking and record keeping, such misconduct cannot be tolerated." A Notice of Violation was issued.

√ August 9, 1994 - During an inspection of TMI's radioactive waste management and transportation program, the following "minor weaknesses" were documented in "auditors' training and qualifications, timeliness of updating isotopic distribution (i.e., scaling) factors, and controls for limiting public dose from the storage of radioactive waste" (James H. Joyner, Chief Facilities Radiological Safety and Safeguards Branch, Division of Radiation Safety and Safeguards, NRC, August 9, 1994.)

√ **September, 1995** - Security breach at TMI (See March 1, 1996, for additional information.)

√ **March 1, 1996** - The NRC issued a violation against GPU for a breach in the protected area barrier on February 6, 1996. "Due to this event being similar to other security events that occurred in September 1995 and for which you were cited with a violation, the NRC is concerned about the implementation and effectiveness of the corrective actions to prevent recurrence of that type of violation..." (NRC, James T. Wiggins, Director, Division of Reactor Safety.)

√ August 18, 1996 - "A contractor supervisor [Raytheon Nuclear] at GPU Nuclear Corp.'s Three Mile Island (TMI) tested positive for a controlled substance last week and was escorted from the site" ("*Inside the NRC.*")

√ **October 14, 1997** - GPU agreed to pay a \$210,000 fine for violations identified by the NRC between November 1996 and May 1997 including: inadequate engineering design controls; improperly downgrading safety equipment; and, inadequate implementation of the plant's emergency preparedness program.

√ **April 21, 2001** - GPU fired an engineer who worked at TMI for 20 years for possessing "computer images of children engaging in sex acts or simulated sex acts." The man faces 112 counts and was released on \$50,000 bail (See September 23, 1989 and September, 1991 for related developments.)

√ **October 17, 2001** - Due to a "credible threat" against Three Mile Island, the Harrisburg and Lancaster airports were closed for four hours, air travel was restricted in a 20-mile radius, and fighter jets were scrambled around TMI.

Through the Freedom of Information Act, the York Daily Record (December 21, 2003) found a “twofold” challenge when a threat against Three Mile Island caused the Harrisburg and Lancaster airports to close for four hours: Air travel was restricted in a 20-mile radius and fighter jets were scrambled around TMI.

Officials struggled with whom to call first, next and last. Officials struggled with notifying state and local officials. And officials struggled with when and whether to notify the public...One NRC official had difficulty reaching senior management at TMI...No one contacted enforcement officials in York County about the threat...[PEMA] officials had to push plant officials to staff their emergency operations facility. [in Susquehanna Township which was later relocated to Coatesville].

√ **July 17 2002** - An unoccupied boat docked at the southern end of the Island was spotted by an alert fisherman. He called authorities who initiated a search. There were no company security patrols on duty there since it is outside of the "Owner Controlled Area."

√ **November, 2002** - The NRC releases a two-paragraph e-mail from Joseph Furia, a commission inspector, who advises that the NRC should have been better prepared to respond to the October 11, 2001, non-credible threat made against TMI

√ December, 2002: - AmerGen officials blame a software problem and an inadvertent computer keyboard stroke for the sounding of the TMI's sirens in Dauphin County.

√ June, 2003 - NRC inspectors discover that, on three instances, plant officials found potentially disqualifying medical conditions among its licensed operators but had not reported them to the commission within the required 30 days.

√ August 8, 2003 --ALL BUT TWO PLANTS HAVE ASKED NRC FOR RELIEF FROM A SECURITY ORDER that NRC issued in April. Exelon has asked for a waiver at allow its nuclear generating stations, including Three Mile Island (See July 23, 2003, for a related development at TMI.)

The order had established work-hour controls to address the issue of security guard personnel becoming too fatigued to effectively do their jobs. Susquehanna and Cook were the only plants not to request any kind of exemption. Most asked NRC to consider changing its interpretation of "shift turnover time." The operators do not want that time to be calculated in the total number of hours worked. Almost all also sought a relaxation of the work-hour controls during force-on-force exercises and for related

preparation activities. Garmon West of NRC's Office of Nuclear Security & Incident Response said none of the plants had requested a hearing on the order. He said the staff will respond to each of the exemption requests, possibly by the end of the month (Source: Platts, *Nuclear News*).

√ April 30, 2004: The NRC announced that the agency did not know how many people worked at Three Mile Island-1, but "Personnel didn't consistently recognize degraded conditions. And therefore did not identify degraded conditions in a timely manner (NRC's Annual Assessment Meeting, Middletown, Borough Hall.)

The NRC issued eight violations and "in the area of problem identification and resolution (PI&R) at TMI" (A. Randolph Blough, NRC Director of Division Projects, Region I, March 3, 2004).

√ **October 27, 2003** -NRC AGREED TO RELAX TWO REQUIREMENTS IN AN APRIL ORDER ON SECURITY FORCE personnel working hours. NRC Office of Nuclear Reactor Regulation Director James Dyer Oct. 23 issued notices to all reactor licensees that the agency would allow shift turnover time to be excluded from total group work hours that must be tracked. The NRC staff had wanted accounting of all hours worked for tracking overtime, which it says could lead to worker fatigue, but now agrees with the industry that tracking the extra time does impose some additional burden. Industry officials argued the shift change time is usually not more than 15 minutes. The second relaxation allows licensees to increase the work hours during force-on-force exercises from a 48- to 60-hour per week average. Dyer said the staff understands that the simulated exercises put additional demands on the security guards but the mock attacks extend only for a short period of time (Platts, *Nuclear News*).

√ On May 11, 2004, the NRC issued an inspection report about operator training problems at TMI. Among the litany of problems, two of the eight crews of operators failed their simulator examinations.

The simulator examinations place the crews in a mock control room where they are tested on their ability to respond to simulated accidents, like steam generator tube ruptures, pipe breaks, and power outages. Two of the eight crews failed.

The NRC issued a Green finding. The NRC stated: "The finding is of very low safety significance because the failures occurred during annual testing of the operators on the simulator, because there were no actual consequences to the failures, and because the crews were removed from watch-standing duties...".

The annual simulator testing is done to gauge whether the operators could perform as needed during actual event. To downgrade their inability to do so because the failure happened on a test rather than a real event is troubling. I



suspect that had a crew failed during an actual emergency, the NRC may have issued a dark Green finding.

To downgrade the significance of their failure because they were removed from watch-standing until they eventually pass a test is troubling. I suppose if they had failed during an actual emergency, they also would have not been able to operate another, non-melted reactor until they past a test (UCS, David Lochbaum, nuclear engineer.)

√ March 30, 2004: A Wackenhut security guard stationed at TMI's north gate failed to respond to a vehicle for 15 seconds.

√ October 1, 2004: A nonlicensed employee was inattentive in a lunch room. No details were available.

√ August 28, 2005: A Wackenhut guard responsible for checking employee badges at TMI's north gate failed to acknowledge a vehicle for at least 15 seconds.

√ December 11, 2005: A shift manager with responsibility for the entire plant was observed sitting at his desk with his head tilted back.

√ December 19, 2005: A Wackenhut guard stationed at the north gate failed to acknowledge a vehicle for six seconds.

TMI punishes 3 more 'inattentive' workers

Wednesday, January 18, 2006

BY GARRY LENTON  
Of The Patriot-News

The operator of Three Mile Island said yesterday that the company had investigated three additional reports of inattentiveness by employees of the nuclear plant during the last two years.

√ **January 28, 2005** (The Associated Press)

HARRISBURG, Pa. - A policing agency of the nuclear industry has concluded that the training program for control room workers at Three Mile

Island needs improvement.

The Exelon Nuclear training program was placed on probation last month by the National Nuclear Accrediting Board, which reviews training programs every four years at commercial nuclear plants.

The action could prevent the board from reaccrediting Three Mile Island's program. The exact result is unclear, however, because no nuclear station has lost its accreditation since the program started 20 years ago.

The National Nuclear Accrediting Board reports its findings to the Institute of Nuclear Power Operations, an industry policing organization established after the 1979 accident at the plant's other reactor. Institute spokesman Terry Young would not discuss the case.

A union official said staffing cuts were to blame, as did a watchdog group. "This is not the workers' fault. This is management's fault," said Eric Epstein, chairman of the nuclear watchdog group Three Mile Island Alert. "The plant is not adequately staffed."

The number of employees has been cut more than 30 percent since 1999, when Chicago-based Exelon bought Three Mile Island's Unit 1 from GPU Nuclear. Unit 2 hasn't been used since the nation's worst commercial nuclear accident, when a portion of the reactor's core melted.

Exelon spokesman Ralph DeSantis said staffing was not an issue. He said the plant was faulted for "not using a systematic approach to training as vigorously as we should be." The accrediting organization will re-evaluate the training program next summer, DeSantis said.

√ On July 29, 2005, the NRC issued a White Violation relating to another staffing deficiency at Three Mile Island where "approximately 50% of the emergency responders," including "key responders" were "overdue" for their annual training for "an approximate five month period (Please refer to Thursday, July 14, 2005, for background material).

√ **Three Mile Island guards sue over wage dispute**  
1/11/2006 , By MARK SCOLFORO, The Associated Press

HARRISBURG, Pa. (AP) — Dozens of guards at the Three Mile Island nuclear power plant claim in a federal lawsuit that a private security agency made them work unpaid overtime for more than two years.

The lawsuit alleges that Wackenhut Corp. wasn't paying the 79 guards for

the time it took them to get armed and check through security from January 2002 until April 2004.

The guards' lawyer, Leslie Deak, said the time in question was typically 10 or 15 minutes before work and a few minutes at the end of their shifts, and that the workers are entitled to hundreds of thousands of dollars in back pay.

The company has declined to compensate them for the allegedly lost wages, but began paying the guards for that time after they staged a work action, she said.

"They all arrived one minute before their start time, and needless to say, even though they were there before their hours — they were not late — they were late to their posts," Deak said. "Guess what? It takes more than a minute to get them all checked in."

✓ **TMI punishes 'inattentive' plant workers**

Monday, January 16, 2006, **BY GARRY LENTON, Of The Patriot-News**

A top manager and a security guard at Three Mile Island were reported "inattentive" while on duty in two separate incidents last month, company officials acknowledged.

"Inattentive," often a euphemism for **sleeping**, means the employee was not focused on the job.

At 3:45 a.m. on Dec. 11, a shift manager with responsibility for all operations of the plant was seen by a control room operator sitting at his desk with his head tilted back. The manager's office is visible from the control room of TMI's Unit 1 reactor through a large glass window.

"The control operator called the shift manager on the phone, and the shift manager immediately answered and displayed normal, coherent behavior," said Ralph DeSantis, a spokesman for plant operator AmerGen Energy.

However, the manager was removed from the shift and disqualified from working in a managerial post pending the outcome of an internal investigation, DeSantis said. The employee is being permitted to work in a nonsupervisory role, he said.

Eight days later, at 3:50 a.m. on Dec. 19, a Wackenhut security guard stationed at the plant's north gate was slow to acknowledge an employee arriving for work.

"The officer did not do anything to acknowledge that the car was there," DeSantis said. "Normally ... even if the officer is on the phone, they will turn and acknowledge you. In this case, that didn't happen immediately."

Though the delay lasted only six seconds, it was considered unusual, he said. Sanctions were leveled against the guard, but DeSantis would not specify what they were. Possible disciplinary actions include a letter of reprimand, time off without pay or dismissal, he said.

Security at the plant was increased after the Sept. 11, 2001, terrorist attacks. Since then, guards have stopped vehicles at the entrance and cataloged visitors. Additional protections, including sweeps for explosives, are conducted by guards a few hundred yards beyond the north gate.

AmerGen reported the incidents to federal regulators and the state Bureau of Radiation Protection, DeSantis said.

"Our resident inspectors and specialists have been inspecting, and the staff also have had discussions with the company about this," said Diane Screnci, a spokeswoman for the U.S. Nuclear Regulatory Commission, which oversees commercial nuclear plants. "We are ensuring that the company understands what happened and why it happened."

She said the NRC is not investigating because the incidents were not reportable under licensing requirements.

Sleeping on the job is a touchy issue for the nuclear industry, which is under increasing pressure to produce energy at competitive rates and protect plants from terrorist attacks.

In 1987, the NRC shut the Peach Bottom nuclear station in southern York County because napping in the control room was common and accepted by senior management at Philadelphia Electric Co., then owner of the plant.

Last year, the NRC reprimanded a shift supervisor at the Pilgrim Nuclear Plant in Massachusetts for failing to write a report about finding a control room operator sleeping. The sleeping employee was fired.

Sleeping on the job raises concerns about the environment at the plant and the company's dedication to vigilance, especially among security forces, said David Lochbaum, a nuclear safety expert with the Union of Concerned Scientists, a watchdog group in Washington, D.C.

"It suggests a cavalier attitude toward safety," he said.

However, he said, the events at TMI did not sound as dire as events at Peach Bottom or Pilgrim.

"These are human beings, so it's conceivable that you could fall **asleep**," Lochbaum said. "It's how you respond to it once it's discovered that really determines whether you have a problem or not."

A dozing security guard would be the greater concern, he said, because a few seconds are all that is needed to give an attacker an advantage.

AmerGen has hired an outside investigator to review the event involving the shift manager, DeSantis said.

AmerGen has a stringent fitness-for-duty policy that trains employees to look for signs of fatigue in themselves and co-workers and report them, he said.

Eric Epstein, chairman of the watchdog group Three Mile Island Alert, criticized the NRC for not conducting an investigation. He also called on AmerGen to delay plans to remove the North Gate guard station until an investigation is completed.

Exelon Nuclear, AmerGen's owner, announced last month that the North Gate station would be removed. It is expected to close this week.

"The fundamental question is whether this is widespread and systemic throughout TMI. Are these isolated incidents or part of a growing trend attributable to understaffing?" Epstein said.

The incidents are the first since AmerGen bought the plant in 1999.

In 1991, a worker overseeing the evaporation of radioactive water from the damaged Unit 2 reactor was fired for **sleeping**. In 1987, a shift supervisor at the damaged reactor **slept** while on duty during defueling operations, an NRC investigation found.

PAGE

PAGE 8

**Overtime bears risk, guards at TMI fear**

## **Some are putting in 60- to 72-hour weeks**

Monday, February 05, 2007

**BY GARRY LENTON**

**Of The Patriot-News**

He spends 13 hours a day guarding the Three Mile Island nuclear plant.

Normally, that's OK. But between August and November, the Wackenhut Nuclear Services employee was asked to work those hours five to six days a week for at least six weeks, according to pay records shown to The Patriot-News.

The schedule leaves time for sleep and a meal but little else before he has to return to work.

It also leaves little time for training. Every shift at TMI has had to cancel training during the last six months, according to sources at the plant.

That is the way it has been at TMI and other commercial nuclear stations, particularly since security measures were tightened after the Sept. 11, 2001, terrorist attacks. Security forces charged with ensuring that terrorists and saboteurs don't cause a nuclear catastrophe say they are working at levels that test their endurance and risk the public's safety.

"It's simply a matter of time until we have another inattentive event or somebody gets hurt because their head's not in the game," said one TMI officer, who asked not to be identified for fear of reprisal.

In 2005, TMI officials cited three security workers for inattentiveness, or sleeping, on the job. Each incident occurred during the night shift.

Federal regulations allow workers to report themselves "unfit for duty" if they are too tired to work, but officers interviewed for this story say most won't do it out of fear of losing their jobs.

The U.S. Nuclear Regulatory Commission, upon learning of the workers' concerns from a reporter, announced last week that it would investigate.

The problems faced by security workers are the same as those faced by truck drivers, hospital workers and air-traffic controllers. How long can a person stay on the job before his effectiveness is compromised by fatigue?

Working five to six 12-hour shifts a week is risky, said Dr. Gregory Belenky, director of the Sleep and Performance Research Center at Washington State University in Spokane.

Sleep sustains performance, alertness and safety, he said.

"The schedules you describe would impair those things," he said. "It would make people less safe."

**A widespread problem:**

The concern is not unique to TMI:

\* In 2002, a Wackenhut employee at the Indian Point Nuclear Station in New York told the NRC he was fired after raising a concern about working excessive overtime.

\* In 2004, Florida Power and Light sought the NRC's permission to exceed work-hour limits because of a high turnover rate among security workers at its Turkey Point Nuclear Station.

\* In 2006, Time magazine reported that excessive overtime at the Pilgrim Nuclear Station in Massachusetts was linked to poor preparedness and performance by the guard force.

"It's a hell of a problem around the country," said Peter Stockton, senior investigator for the government watchdog group Project on Government Oversight.

In 2003, POGO released a study of nuclear plant security based on interviews with security workers around the country. The report found several problems, including excessive overtime. Since then, conditions have improved at some plants, while others have done nothing, Stockton said.

"I interviewed guards on 60 and 72 hours, and I can tell you, they are like marginal zombies," he said.

TMI spokesman Ralph DeSantis said overtime hours are closely tracked and monitored to ensure compliance with federal regulations. However, he confirmed that one employee recently exceeded the 72-hours-a-week limit.

Exelon Nuclear, the owner of 10 nuclear plants including TMI, Peach Bottom and Limerick, is working with Wackenhut to reduce overtime, DeSantis said.

"Our goal would be to do training without requiring people to do overtime to get training done," he said.

TMI started two training classes for new officers last year and recently added a third, he said.

Wackenhut last week signed a contract with the United Government Security Workers of America, the union that represents the security workers, that will increase the guard force by 12 percent over three years.

Shawn P. Kirven, vice president of nuclear operations for Wackenhut, said the company does not routinely require its employees to work 60- to 72-hour weeks. Company records for 2006 indicate that the officers worked an average 44.7-hour work week. The company is working to reduce overtime hours, he said.

"Can we satisfy everyone in a work force the size that we maintain at TMI? Not always," he said. "Are we sometimes required to work officers on overtime when they would rather be home with their families? Unfortunately, yes."

### **Officers cite quality of life:**

According to the National Sleep Foundation, fatigue is a factor in more than 100,000 traffic crashes a year, resulting in 71,000 injuries and 1,500 deaths.

Fatigue is difficult to avoid with a 12-hour shift, particularly at night, Belenky, the researcher, said. Humans are more awake during the day and sleepy at night in what is known as circadian rhythm.

Shifts of 12 hours are sustainable "provided you don't do anything else," he said.

The TMI officers said their quality of life suffers, particularly for those who are married and have children or parents to care for. For them, the spouse bears the brunt of the housework.

"I don't even have time for friends," said the spouse of one officer. "It's hard because there is no time for intimacy, no time to go out."

### **NRC reviews overtime:**

The long hours cited by plant workers are allowed under federal regulations. NRC rules say security officers can work up to 72 hours in a seven-day period. The same rules allow workers to spend as many as 16 hours on a shift in a 24-hour period.

Plant owners have leeway around that, however, because the agency allows the plants to use group averages. Some workers can log consistent 72-hour weeks as long as the overall average for the force doesn't exceed 48 hours a week.

But NRC commissioners are weighing regulations that would put tougher restrictions on the industry's use of overtime.



The proposal would eliminate group averaging and require security workers to get an average of three days off per week over a four- to six-week cycle.

Jack Roe, director of operations for the Nuclear Energy Institute, an industry group in Washington, D.C., said plant owners recognize the problem of excessive overtime and support NRC efforts to reduce it.

But the industry is seeking the ability to allow more overtime for workers who want it during refueling outages, he said.

"We really support the great majority of this rule," Roe said. "But we don't want to have unintended consequences."

GARRY LENTON: 255-8264 or glenton@patriot-news.com

©2007 The Patriot-News

© 2007 PennLive.com All Rights Reserved.

## **Probe finds TMI guards' overtime within rules**

Thursday, July 19, 2007

**BY GARRY LENTON**

**Of The Patriot-News**

Overtime hours worked by security officers at Three Mile Island for much of last year were mostly within limits imposed by federal regulators, an investigation by the U.S. Nuclear Regulatory Commission concluded.

The NRC initiated the probe in response to a story published in The Patriot-News in February, in which security workers expressed concerns about the effect mandatory overtime was having on their effectiveness and their families.

The officers, who are employed by Wackenhut Nuclear Services, also said that a manpower shortage was disrupting training schedules and that fatigued staff were reluctant to report themselves unfit for duty for fear of losing their jobs.

Pay records obtained by the newspaper showed that one employee worked 13 hours a day, five to six days a week for six weeks.

But the NRC, relying on an internal investigation carried out by Exelon Nuclear, the parent company of plant operator AmerGen Energy, concluded that the hours worked were allowable under agency rules. Those rules allow individuals to work up to 72 hours a week. The rule also permits plant operators to average the hours worked by several employees, allowing some, but not all, to spend longer hours on the job. The probe found two exceptions where a security officer worked more than the allowed hours. The finding was characterized as a minor violation that didn't require an enforcement action, according to the NRC's report.

Investigators found two instances where training was delayed, but both sessions were rescheduled, the report said.

Investigators also found that some security officers believed they could be disciplined for reporting themselves unfit for duty. But a review of Wackenhut records for 2006 "found no instances in which an officer was disciplined for self declaring," the report said.

### **Rules to change:**

The agency's report drew critical responses from watchdog groups and plant workers who questioned the legitimacy of its conclusion, given that it was carried out by the plant owner.

"You have the numbers that show what we were working. I think they speak for themselves," said a plant employee who asked not to be identified. "Fatigue and fitness-for-duty issues will always be a problem when you are working 12-hour shifts and trying to do more with less."

Though the NRC's work-hour rules were met, the agency is poised to adopt new rules that would make it harder for plant operators to work employees more than 48 hours a week. The new rules, expected to go into effect this year, would eliminate group averaging.

The change would force most plant owners to hire more officers, industry officials said.

TMI has added several security officers to its staff this year, AmerGen spokesman Ralph DeSantis said.

"The old condition was that people were trained on overtime," he said. "Now we're to the point where officers can be trained on regularly scheduled work time. This is where we want to get to."

Earlier this year, Wackenhut signed a contract with the United Government Security Workers of America, the union that represents the security workers. The contract calls for increasing the guard force by 12 percent over three years.

"We now have the officers needed to properly man each crew/shift," said Michael Burke, a union officer. "We have significantly cut our fatigue issues to where fitness-for-duty issues should not cause us problems."

## **Conflict of interest?:**

Some industry observers criticized the NRC's policy of having the company investigate itself.

The TMI probe was carried out by a member of Exelon's Nuclear oversight group and a security manager, DeSantis said.

"How can the NRC allow AmerGen to investigate itself?" asked Tom Olivett, a former member of the TMI security force and a former intelligence analyst for the Army. "Is that not like allowing the rapist to investigate his own crime? What was the NRC thinking?" Eric Epstein, chairman of the watchdog group Three Mile Island Alert, had similar concerns.

"AmerGen is not fit to examine and pardon itself," he said.

Richard J. Urban, a senior allegation coordinator for the NRC, said the agency lacks the manpower to investigate each allegation it receives, so it refers concerns back to the plant operators. "We ask that somebody who is independent of the concern come and look at it."

The results of the TMI review were verified by an independent review of plant security by the NRC's physical security baseline inspection, which happens roughly once a year, he said.

David Lochbaum, a nuclear safety expert for the Union of Concerned Scientists, said the NRC's investigations go farther than they used to.

"The company will do the bulk of the work, but the NRC will look at the path they took to see if it's legit," he said.

GARRY LENTON: 255-8264 or [glenton@patriot-news.com](mailto:glenton@patriot-news.com)

## Activist Takes A Drive On TMI Withiut Being Stopped

November 9, 2007

A nuclear safety activist and a photographer drove onto Three Mile Island on Thursday and spent more than 30 minutes photographing the plant without being challenged by security.

Eric Epstein, chairman of the watchdog group Three Mile Island Alert, said he and the photographer entered the island through the south gate and drove about a half mile to a parking lot. The location is about 200 yards from the high security area of the plant.

Epstein said he expected to be challenged by security guards at any moment, but wasn't.

"It just became clear that we were not going to be challenged the farther we got onto the facility," he said.

He called the experience disturbing and said it raised more questions about the adequacy of nuclear security.

But a spokesman for AmerGen Energy, the operator of the plant, said the only thing disturbing about the incident was that Epstein and the photographer trespassed on private property.

"From a nuclear security point of view, this poses no threat to the plant," said Ralph DeSantis, spokesman for AmerGen.

A spokeswoman for the U.S. Nuclear Regulatory Commission, which establishes security requirements for commercial nuclear reactors like TMI, said none of its procedures or requirements were violated, based on accounts provided by a reporter.

The state Department of Environmental Protection's Bureau of Radiation Protection also down played the event.

"These people were ... Outside the area where nuclear security can be compromised," said Ron Ruman, a DEP spokesman. "Therefore, there was no reason for security personnel to act."

Epstein said he crossed onto the island through the south gate, which is rarely used except when the plant is shut down for maintenance and refueling. TMI went off line for refueling two weeks ago.

During outages the south entrance is used by some 1,200 part-time employees hired to make repairs and upgrades at the plant.

Once across the bridge, Epstein drove to within 50 feet of a guard station, but made no attempt to go past it.

He said he saw no security officers during his visit.

Epstein said he was giving the photographer a drive-by tour of TMI when he noticed the gate to the south bridge was open and decided to go in.

“I was curious to see how far you could go without being stopped,” he said. “I was disturbed that I was able to penetrate that far onto the island without an impediment.”

The photographer declined comment.

Two years ago, AmerGen spent about \$500,000 to build a fortified checkpoint that would stop vehicles using the south entrance from getting into the “protected” area of the plant. The checkpoint is about a half-mile from the south entrance and is only staffed during outages. The area, however, is under surveillance, officials said.

Dave Lochbaum, a nuclear safety expert with the Union of Concerned Scientists, found the lack of a security response disturbing.

The NRC on Thursday held a meeting on security issues and reiterated the need for plant owners to be aware of people even if they don’t approach the protected area fence, he said.

“The two individuals walking around taking pictures could have been terrorists casing the joint,” Lochbaum said. “Exelon security should have checked.” The incident comes on the heels of a security lapse at Peach Bottom Atomic Power Station, which is owned by Exelon Corp., which also owns TMI.

An employee of security subcontractor Wackenhut filmed colleagues sleeping on the job. Wackenhut was fired from the site by Exelon in October, shortly after the video was made public.

Exelon is reviewing its contracts with Wackenhut at all of its plants, including TMI.

GARRY LENTON: 255-8264  
or glenton@patriot-news.com

## THREE MILE ISLAND

# Exelon axes Wackenhut security

Saturday, December 15, 2007

**BY GARRY LENTON**

**Of The Patriot-News**

The global security firm that protects the Three Mile Island nuclear power station and 29 others nationwide has been fired by the largest nuclear plant owner in the nation. Exelon Corp., stung by a videotape released in September that showed Wackenhut security officers sleeping at the Peach Bottom Atomic Power Station in York County, announced it was ending its relationship with the company as its contracts expire next year.

The move affects TMI and the Limerick plant in Montgomery County. Exelon ended its contract with the security firm at Peach Bottom in November.

As with Peach Bottom, security will be taken over by Exelon, and Wackenhut employees can apply to keep their jobs, said Craig Nesbit, a spokesman for the Chicago-based energy company.

"We have decided to directly manage our own security force to ensure the highest standards of excellence," said Exelon's Chief Nuclear Officer Charles Pardee. Eric Wilson, president of Wackenhut's Regulated Security Solutions Division, said the company regretted the loss of Exelon as a customer, but was not surprised.

Wilson said he was proud of Wackenhut's employees and noted there have been no security breaches or penetrations by terrorists at any of the facilities it protects. Wackenhut protects 30 nuclear plants in 16 states. The loss of the Exelon contracts cuts that number by a third.

The U.S. Nuclear Regulatory Commission concluded that the work environment at the plant contributed to the problem and called on Exelon to make changes. It is expected to cite the company with a violation of NRC rules; no fine is likely. This week, the agency required plant operators to file reports detailing how they detect and correct behavioral problems that affect the alertness of security officers. The NRC will review the information to determine if more regulatory actions are needed, officials said.

NRC spokesman Neil Sheehan said the agency had no role in Exelon's decision but would monitor the changeover.

U.S. Sen. Bob Casey Jr., D-Pa., sent a letter Friday to Wackenhut's chairman and CEO, Gary Sanders, demanding information about the incident at Peach Bottom. Casey said he was concerned how Wackenhut handled complaints. Kerry Beal, a Wackenhut employee at Peach Bottom, warned his supervisors that co-workers were routinely sleeping in a break room. Beal, in an interview with The Patriot-News, said he was scolded by the supervisor for not being a "team player."

Beal tried to get the NRC to investigate, but the agency told Exelon to conduct the probe. No problem was found. When those efforts failed, Beal made the videotape and gave it to WCBS-TV in New York City.

"Today's event spells the end of Wackenhut as a private contractor in the nuclear industry," said Eric Epstein, chairman of the watchdog group Three Mile Island Alert. Exelon officials will not disclose the number of security workers, but those familiar with the operations say the decision will affect more than 1,000 Wackenhut employees.

TMI will be the first plant to change from Wackenhut to Exelon control, said Craig Nesbit, spokesman for Exelon. The change will occur in February, he said. Limerick will make the change in April and security at all plants Exelon plants will be completed by July, he said.

GARRY LENTON: 255-8264 or [glenton@patrio](mailto:glenton@patrio)

## **Wackenhut Chief Exits as Reactor Guards Caught Asleep**

By Tina Seeley Jan. 10, 2008 (Bloomberg) -- Wackenhut Corp. Chief Executive Officer Gary Sanders left a month after the security company lost contracts from Exelon Corp. because guards fell asleep on the job at a nuclear power plant.

Sanders, 55, will be replaced by G4S Plc Chief Operating Officer Grahame Gibson, Wackenhut said in a statement today. Gibson will continue to serve as operating chief and a board member of UK-based G4S, parent company of Wackenhut.

Exelon, owner of the largest fleet of U.S. commercial reactors, said last month it was terminating all nuclear-plant security contracts with Wackenhut after guards at its Peach Bottom reactor in Pennsylvania were videotaped asleep while on duty. The videotapes were made public in September.

``They had so many other problems," David Lochbaum, director of the nuclear safety project for the Union of Concerned Scientists, said about Wackenhut. ``It's no single disaster that caused this resignation, it's the potpourri of disasters."

The sleeping guards incident drew criticism from members of Congress, including Michigan Democratic Representatives John Dingell and Bart Stupak of the House Energy and Commerce Committee. The legislators said this week they will ``conduct a comprehensive review" of the U.S. Nuclear Regulatory Commission's operations because of the sleeping guards and other agency issues.

``This change in leadership had nothing to do with the Exelon situation at all," Wackenhut spokesman Marc Shapiro said in a telephone interview. Gibson, 54, was tapped to help the company with a new business strategy, announced in November, he said.

### **Security**

Including the Exelon contracts, which will be phased out by the middle of this year, Wackenhut provides security service at 31 of the 65 U.S. nuclear power-plant sites. About half of the plants have their own in-house security services, said Lochbaum.



``Mr. Sanders' resignation does not resolve the outstanding issues of how Wackenhut handled security concerns at Peach Bottom or Wackenhut's performance at other facilities," Senator Bob Casey, a Pennsylvania Democrat, said in an e-mailed statement. ``I will continue to scrutinize Wackenhut's handling of the Peach Bottom incident as well as the larger issue of security at all nuclear power plants."

Sanders left the company two days ago. ``It was a mutual decision, to the best of my knowledge," Wackenhut's Shapiro said.

Exelon faces ``a good likelihood they will also get a fine for what happened at

Peach Bottom," Lochbaum said in a telephone interview. G4S fell 5.25 pence, or 2.4 percent, to close at 214.75 pence on the London Stock Exchange. Exelon dropped \$1.33, or 1.5 percent, to \$85.19 in composite trading on the New York Stock Exchange.

To contact the reporter on this story: Tina Seeley in Washington at [tseeley@bloomberg.net](mailto:tseeley@bloomberg.net) .

*Last Updated: January 10, 2008 16:28 EST*