

Evacuating Three Mile Island: A Parent's Perspective

Central Pennsylvania is middle America. We enjoy holiday parades, Friday night football and old fashioned everything. We welcome the change of seasons and pretty much stay put from generation to generation. We're used to America coming to us to visit Gettysburg, marvel at the Amish, and smell Hershey chocolate.

My father admired the technology that was Three Mile Island. Driving towards the nuclear power plant he confidently welcomed the billowing steam clouds. Many residents boated, fished or water skied around the island. School students routinely were paraded through the plant to greet their future. My dad was assured me that an accident at Three Mile Island was "not possible." I believed my dad. We believed the nuclear industry and the government.

The last week of March 1979 was unseasonably warm. Central Pennsylvanians stepped outside for their first, prolonged post-winter break. While Gov. Richard Thornburgh was acclimating to Harrisburg, the "new" reactor in Middletown was struggling to stay on line. On Wednesday, March 28, 1979, TMI became a household name. Two days later, while school was in session, area residents fled the area not knowing if or when they would return. America now knew Central Pennsylvania for all the wrong reasons.

Evacuation plans in 1979 were little more than an afterthought, stashed in a drawer. The problem is that people are people; not hypothetical numbers that can be used for precise planning. Human behavior rarely conforms to scientific predictions. People don't want to leave their homes. Farmers don't want to desert their animals. And Coatesville isn't Middletown.

I was away at college during the evacuation. My sister waited for my mom to pick her up at Linglestown Junior High School. My brother was in his first trimester. The family furniture store, which had survived three floods and a fire, remained open.

Hershey still made chocolate, the Amish continued to plow Lancaster's fertile earth, and the battlefield at Gettysburg still attracted visitors.

But in Middletown, Mayor Robert Reid directed traffic out of town as fleeing residents asked him to protect their homes while they were gone. To the north, streams of citizens from Harrisburg flowed down Market Street to line up for busses heading anywhere.

Across the river, Goldsboro became a ghost town while dairy cows continued to graze in Etters, and the City of York, like Harrisburg and Lancaster, had no evacuation plan for a nuclear accident.

The TMI community remains a living case study of how not to evacuate. For those of us who live, work and parent in the shadow of Three Mile Island, the Accident continues to exact a toll. Many residents still keep an overnight bag packed, a stash of "TMI money", and make sure their cars have a full tank of gas at all times.

No reactor community should have to endure another nuclear nightmare. At the very least, we should stop pretending that emergency evacuation planning for small children is adequate. I need to be able to get in my car, drive past Three Mile Island, and tell my daughter that adults are doing everything humanly possible to make sure there is no "next time."

What has changed?

- **Adult care: Assisted living and long-term care facilities.**
- **Age of employees and age of population.**
Loss of institutional memory.
- **Airplane: The original 767 entered service in 1982.**
- **ATM.**
- **Bridge and road quality.**
- **Chernobyl: Dead Zone.**
- **CB v. cyber insecurity.**
- **Day care and preschool facilities.**
- **Decommissioning fund: \$0.**
- **Deregulation & LLC: CTC's.**
- **Dedicated EOF v. EOF on Coatesville.**
- **Flight 93 & 9/11.**
- **Fukushima: 18 v. 50.**
- **Great-grandparents.**
- **House & pet sitting & role of veterinarians.**
- **Ownership divided and split.**
- **PDMS: TMI-2 & K-effective.**
- **Radioactive waste stored in spent fuel pools: 940 tons.**

- **School buses: Fate of unprotected children (Post-Sandusky Era), children taken to multiple relocation centers, out sourcing contracts & seating capacity, e.g., size of children.**
- **Security: 1993 & Perry County terror training.**
- **Siren upgrade: 79 -94.**
- **Temperature and availability of water: Marcellus shale impact on water and roads.**
- **Timeliness assumptions.**
 - **Reliability: Decline in staffing levels and response rates since deregulation.**

- **Steam generator replacement:** The trip culminated with a 75-mile journey over land that began Sept. 8 in Port Deposit, Md. and traveled through four counties and 17 municipalities in Maryland and Pennsylvania before arriving at TMI. The generators arrived on September 30.

George Beam, Chief Operating Officer of AREVA NP Inc. said, “Delivering these generators required complex logistics involving government and regulatory agencies in two states and numerous local communities and authorities.

- **Valentine’s Day Massacre on Wednesday, February 14, 2007:** Interstate 78 through the Lehigh Valley and Berks County was one of six interstates that the Governor ordered closed in addition to Interstate 76 (the Schuylkill Expressway), Interstate 476 (the Blue Route), Interstate 676 (the Vine Street Expressway), and Interstate 176 between Reading and Morgantown as well as Interstates 81, 83 and PA 581 in the central region of Pennsylvania.

- **Traffic planning: Congestion, failing intersections, older drivers, traffic counts and texting.**

- **Trust.**

- **Weather channel.**

- **Weather events; fast moving floods = standing water.**

- **Web listing and Yellow Pages.**

What has not changed?

- **Agriculture: Crops, livestock and seasonal demands, e.g. farm equipment on roads.**
- **Chain of communication.**
- **Counties within ten miles of Three Mile Island, yet the NRC does not require emergency planning for the cities Harrisburg, Lancaster, Lebanon or York.**
- **Friday and Saturday football traffic.**
- **Hershey Hospital experience.**
- **Human behavior.**
- **KI + 20.**
- **Location: Air, land and water.**
- **Kids become parents and parents become grandparents.**
- **Property insurance.**
- **Relocation centers.**
- **Routing: 11/15, 30, 83 and Turnpike.**
- **School buses: Role of bus drivers and parents.**
- **Seasonal population shift due to hunting, reenactment tourism, e.g., 2.3 million visitors in the summer.**
- **Special populations: Amish and Old Order Mennonite.**
- **Volunteer fire companies.**

Federal regulations passed after the 1979 accident at TMI require state and local governments to plan to protect "special populations" within 10 miles of a nuclear power plant including prison inmates, nursing home residents, hospital patients and children in school or day care.

SLIDE PRESENTATION

We sent questionnaires to 73 state-licensed centers in Cumberland, Dauphin, Lancaster and York counties in December, asking how much support they have received from federal, state and local authorities to develop plans for a nuclear emergency. Half of the centers, caring for nearly 1,500 children, responded. Among the findings:

- 87% don't know who would provide transportation for their children.
- 58% don't know to which relocation center they should take children.
- Two-thirds have not been provided transportation by the state, the county or a municipality.

Even those with evacuation plans admitted they were relying on assumptions about where they would go and how they would get there.

The survey shows that the state is not in compliance with federal regulations for a nuclear emergency, said Eric Epstein, founder of the monitoring group.

"What we found is a lack of coordination for transportation amplified by a lack of vehicles," Epstein said. "There simply are not enough vehicles to take the kids there."

Epstein and Larry Christian of New Cumberland claim that Pennsylvania has been **out of compliance with federal Radiological Emergency Response Plans for decades.**

What Are the Evacuation Standards for School Kids?

TMIA's Proposal: 2007

- **“General populations” must be moved 10 miles from a nuclear power plant during an evacuation.**
- The "minimum" mandated relocation distance for the general population is 5 miles past the 10 mile plume exposure boundary: **15 miles from the reactor.**
- The NRC recommends the general population be located 10 miles past the 10 mile plume exposure boundary. **20 miles from the reactor.**
- However, host school pick up centers for kids only need to be 10 miles and 1 inch from the reactor.
- **Solution:** Locate host school pickup centers a minimum distance of at least five miles and preferably 10 miles beyond the plume exposure boundary zone.
- **“Why would the NRC insist on keeping children within a zone of exposure during a radiological emergency?”**