

Subject: Why Maine Yankee Cashed In

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It wasn't a purely economic decision

A Friends of the Coast Press Advisory

It has been more or less consistently reported that in 1997 Maine Yankee Atomic Power Station owners decided to permanently close the plant because of economic considerations. That is true to the extent that the market would not support fixing all that was wrong with the plant, including a long list of safety related defects. I was there at NRC headquarters in February 1997 when Maine Yankee blamed poor communications and hand off of responsibility at the interface between Maine Yankee and Yankee Atomic for poor engineering and analysis issues identified in the 1996 NRC Independent Safety Inspection. Maine Yankee said that because they were a stand-alone plant at the end of the information pipeline they had failed to keep up with industry standards. I had tracked cable separation issues from 1991 forward including a chain of letters and sliding commitments to NRC that lasted until December 1996 when it was decided to at last fix the problems. On December 6, 1996, a decision was implemented to shutdown to address the cable issues along with other issues arising from the ISA. I was at local meetings in 1996 when Maine Yankee and NRC Region One said that emerging electrical cable separation issues were not the same as those identified by NRC whistle blower Peter Atherton almost twenty years earlier (1978) when Atherton reported that MY had no dependable electrical schematics and that employees could not identify the source, destination, or purpose of electrical cables in any given cable tray because they were not color coded or marked according to any document that could be produced or referenced. On my bookshelf sits the February 1997 Conger and Elsea MYAPS Cable Separation Root Cause Analysis Report that confirms Atherton and which has among its conclusions: FEs (plant electrical drawings) were based on "as designed" information and were not field verified after construction; cable penetrations thought to be empty based on drawings were found to be "loaded with wires and cables;" as of January 17, 1997, the Engineering Assistance Group had been requested to manufacture c. 3800 labels for cables, sleeves, and trays, as a result of recent walkdown inspections. The cable "fixit" campaign faltered and ground to a halt in April 1997. I was at the April enforcement meeting at NRC Region One when Maine Yankee's Entergy management proposed, that because cable vaults were packed, inaccessible, and cable routing and circuits were a mystery, they be permitted to simply bracket the vaults with thousands of circuit breakers. To its credit NRC was cold to this loony-tunes proposition. Maine Yankee told me that, in the end, cable separation was one of the big-ticket items that turned-off prospective buyer, PECO. The first mention of Cable Separation issues, by the way, was with a few months of plant start-up: feedback through a common ground had control rods moving in and out on their own; and cross-overs in instrumentation and control drawers, had NRC's Dr. Steven Hanauer intone, "Some day we will all wake up." I have provided an abbreviated list of Maine Yankee safety defects below. Anyone interested in pursuing other issues is invited to search NRC files for my name, the Independent Safety Assessment, Commission Meetings, and/or Friends of the Coast in the 1996-1997 time frame. It is my working hypothesis that;

- Maine Yankee was more typical of 1970's nuclear plants than that it was the exception;
- had it survived the bleak market of 1997, it would today be a candidate for license extension and possibly an uprate (its second),
- that, like Maine Yankee, many of today's operating plants are not properly designed to meet performance/safety criteria, are not built according to design, and have modified or improperly maintained in a way that loses the original performance/safety design,
- among those plants is my current "assignment" for the New England Coalition, the Vermont Yankee Nuclear Power Station- no better, perhaps no worse, than Maine Yankee, Connecticut Yankee, Yankee Rowe, or Millstone Unit One.

Thank you,
Ray Shadis

Here, for the record, follows a short list of MYAPS defects at the time of closing:
Safety-Related Deficiencies Discovered at Maine Yankee Atomic Power Station 1996 – 1997

1. *Improper Small Break Loss of Coolant Accident (Emergency Core Cooling function) analysis in support of increased power*
2. *Electrical cable separation issues*
3. *Missing safety related cables*
4. *Inadequate High Energy Line Break analysis*
5. *Inadequate protection of vital equipment in the event of High Energy Line Break*
6. *Undersized Atmospheric Steam Dump Valves*
7. *Improper accident containment pressure calculations and/or undersized containment*
8. *Failure to provide pressure relief for piping passing through containment walls*
9. *Components not qualified for accident conditions*
10. *Defective fire barriers (seals) >90% defective, improperly installed, containing voids, foreign material, etc*
11. *Control room design issues*
12. *Auxiliary feedwater pump operability and availability issues*
13. *Marginal Emergency Diesel Generator capacity (3/10 of One Percent under estimated potential loads)*
14. *Corroded piping external surfaces*
15. *Plant computer antiquated and easily overloaded*
16. *Instrumentation and control equipment becoming obsolete*
17. *Electrical and instrumentation logic issues*
18. *Unreliable refueling machine*
19. *Poor diesel room ventilation*
20. *Motor operated valve issues -replacement, installation, reliability*
21. *Pump motors in need of overhaul*
22. *Emergency feedwater flow instrumentation inaccurate and unreliable*

23. *High Pressure Safety Injection system performance not verified*
24. *Containment spray pump with inadequate margin*
25. *Unnecessary radiation source term*
26. *Inadequate Component Cooling Water and Service Water heat removal margin*
27. *Inadequate offsite power reliability*
28. *Turbine hall flooding under accident conditions*
29. *Service crane in poor repair*
30. *Piping internal erosion/corrosion issues*
31. *Primary-side valves susceptible to jamming*
32. *Improperly analyzed steam generator isolation times following steam tube break*

and more.

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