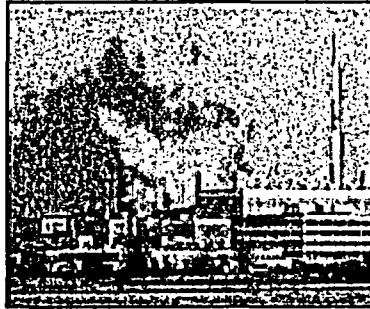


# CONNECTICUT COALITION AGAINST MILLSTONE

[www.mothballmillstone.org](http://www.mothballmillstone.org)



Norwich Bulletin

MILLSTONE UNIT 3 GUSHING STEAM  
TO THE ATMOSPHERE ON SUNDAY 4/17/05

April 21, 2005

Paul G. Krohn  
Chief Inspector, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia PA 19406-1415

Dear Mr. Krohn:

This is a formal request that you permit a representative of the Connecticut Coalition Against Millstone and its technical consultant to join the special NRC inspection of Millstone Unit 3, as described in the NRC's April 20, 2005 press release.

Allowing public representatives to participate alongside its inspectors will greatly enhance the public's confidence in the NRC's commitment to the public health and safety above all other considerations in this matter.

Thank you for your careful consideration of this request.

Sincerely,

Nancy Burton

A/59

Please respond to:  
Nancy Burton  
147 Cross Highway  
Redding Ridge CT 06876  
Tel. 203-938-3952

Beginning at 8:40 A.M. and continuing throughout the day, massive clouds of steam billowed from Unit 3, accompanied by a clamor of raucous noises and vibrations which could be felt and heard in homes two miles away.

Some local residents were so unnerved by the spectacle and clamor that they took potassium iodide pills because of concerns Iodine-131 releases might lead to thyroid cancer.

Although both Dominion and the U.S. Nuclear Regulatory Commission issued statements at the outset of the event denying releases of radioactive attributable to the event, we know these pronouncements were, at best, premature. Millstone's radiation monitoring program is prone to equipment failure, the high-range station stack was found by NRC inspectors to have become degraded in 2004,<sup>1</sup> many radioactive releases are not regulated and strontium-90 releases to the air are measured in goat milk which could not have yet been sampled nor laboratory-analysed at the time the Dominion and NRC press releases were issued.

We understand that the NRC has sent a special inspection team to Millstone to try to understand fully all the issues which contributed to the Class II Emergency. Their report is scheduled to be issued 45 days later.

We are very concerned that Millstone Units 2 and 3 are operating

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<sup>1</sup> See NRC Inspection Report July-29, 2004.

currently with degraded conditions and that serious deficiencies in maintenance and training pose a present unacceptable danger to the public. We attach the Coalition's compilation of the most serious such conditions, as documented from NRC inspection reports in 2004. A culture of cost-cutting has taken root at Millstone and may have contributed to Sunday's frightening events.

We have invited Dominion to send a representative to a public meeting to explain what happened on April 17, answer questions and – might we hope? – extend an apology to the community – **before Dominion attempts to restart Unit 3.**

Please lend us your support and assistance for such a meeting.

Sincerely,

Nancy Burton

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147 Cross Highway  
Redding Ridge CT 06876  
Tel. 203-938-3952

## **Millstone-2004: Expose of Degrading Conditions**

During the year 2004, Dominion routinely violated its licensing conditions at its Unit 2 and Unit 3 nuclear reactors, cut corners on safety, misled the U.S. Nuclear Regulatory Commission and exposed the State of Connecticut to a heightened risk of nuclear oblivion.

There is a rational response to this fiasco: **MOTHBALL MILLSTONE NOW!** Close the plant, move the deadly tons of intensely radioactive waste to safe onsite storage – in dispersed underground bunkers – and convert the site to wind, solar and wavepower generation of electricity.

Below we list many – by no means all – examples of serious errors and degrading conditions which occurred in 2004 and which your government at every level tolerated. Any one of these conditions, combined with others, could have contributed to a serious accident or worse. Your public officials compromised your safety and your future. Call them, email them, write to them. Wake them up! Contact numbers and email addresses appear at the bottom of this item.

### Unit 2

Millstone Unit 2 is a 870-megawatt nuclear reactor which went online in 1975. It has one of the worst operational records in the entire U.S. nuclear industry. The NRC ordered it shut down for three years (1996-1999) because it was so unsafe. Connecticut's Department of Public Utility Control declared it "no longer used and useful" in 1998. Unit 2 produces excess electricity which is not needed by Connecticut consumers. Yet, one of former Governor John G. Rowland's dubious achievements before he pleaded guilty to federal corruption charges was to return Unit 2 to service and keep it operating.

These events occurred at Millstone Unit 2 in 2004:

- A spent nuclear fuel rod *broke* at Unit 2 on August 5 while operators were inspecting fuel assembly failures. The lethal rod fragmented and it took a week for Dominion to recover all the pieces.
- Unit 2's reactor trip breaker failed to shut remotely. This is alarming, given Unit 2's unusual propensity to suffer unexpected and dangerous spontaneous "trips" or shutdowns.
- Unit 2 suffered four reactor "trips" during the inspection period due to equipment failures or personnel error.
- Dominion allowed Millstone's "high-range" radiation monitor – key to measuring radiation doses to the public – to become seriously degraded.
- Atmospheric relief "housekeeping boots" ruptured with potential to interfere with operability of the enclosure building filtration system.
- On April 14, workers discovered that a fuel assembly "had moved several inches upon coming out of the core and would

- not travel into the mast without causing an overload condition.”
- Unit 2 used materials from an unqualified vendor.
  - A reactor trip breaker failed to shut.
  - The spent fuel pool ventilation system was allowed to become degraded.
  - Inspectors discovered a critical modification was made to the spent fuel pool water level indicator without documentation.
  - A loss of shutdown cooling occurred, resulting in an uncontrolled reactor coolant system temperature increase of 14 degrees Fahrenheit.
  - Dominion repeatedly violated Technical Specifications (its formal licensing conditions) throughout 2004. These “Tech Specs” are legal requirements the public has a right to expect will be carried out and enforced.
  - During two unplanned emergency shutdowns, safety valves failed to operate properly and Dominion failed to correct long-standing repetitive failures of these safety valves. The NRC called this failure “more than minor” because it undermined plant stability.
  - The emergency diesel generator was allowed to develop a “through-wall” leak.
  - Dominion failed to follow procedures to properly test pressurizer level control circuitry only when Unit 2 was in shutdown, resulting in the inadvertent startup of both standby charging pumps with one charging pump running. The NRC found “neither operators nor instrumentation and calibration personnel identified these procedure requirements prior to the conduct of testing.” As a result, both “redundant” safety systems were adversely affected, causing a significant pressure rise in the system which nearly exceeded the maximum pressure allowable on the relief valve system.
  - The emergency building filtration system was allowed to degrade.
  - Multiple bolt failure due to corrosion buildup disabled one of two primary circulating water pumps while Unit 2 was at full power on June 10.
  - On June 18, a reactor coolant pump system malfunction was brought about by the failure of a pressure transmitter.
  - Water was discovered in charging pump oil.

- A procedure to test the main steam code safety valve was not independently reviewed by Dominion and supporting documentation was not available to NRC inspectors.
- Degraded conditions were found in the Emergency Building filtration system.
- A "C" service water pump failed a testing program.
- A turbine trip hook malfunctioned.
- A flood door separately emergency diesel generators was left open in violation of procedures.
- Dominion violated its Technical Specifications when it failed to adequately implement post-maintenance testing of a critical pressurizer level instrument; a similar failure was a precursor to the failure to the charging system on March 7, 2003.
- Inspectors discovered that modifications to Unit 2's charging system were not supported by calculations or test data.
- The post-incident recirculation fan timer failed.
- Dominion's failure to properly employ engineering controls led to two workers who handled contaminated air filters to suffer serious radiation exposures from "significant elevated airborne radioactivity concentrations" in the work area on September 29.
- Combustion gas leaked into the emergency diesel generator water system.
- Dominion failed to follow procedures for ventilation function in the switchgear room.
- Unit 2 suffered "excessive leakage" in the radioactive cooling system because of a pump failure.
- The Unit 2 intake structures suffered degrading conditions on November 5, potentially jeopardizing the critical reactor cooling system, due to high winds and high seas.
- Operators did not recognize the significance of several steam generator code "safeties" that had lifted subsequent to reactor trips at Unit 2.
- Operators and engineers at Unit 2 determined compensatory cooling measures installed in a direct current switchgear room at Unit 2 would ensure the availability of the switchgear, while existing technical evaluations stated just the opposite.

### Unit 3

Millstone Unit 3 is a 1,150-megawatt nuclear reactor which went online in 1986. It, too, has one of the worst operational records in the entire U.S. nuclear industry. The NRC ordered it shut down for two years (1996-1998) and put it on its notorious "Watch List" because it was so unsafe.

These events occurred at Millstone Unit 3 in 2004:

- During a draindown of the vital reactor coolant system at Unit 3, the worker assigned to monitoring the refuel pool level left his assignment before completion; the reactor coolant draindown continued in his absence for 1.5 hours. Operators were left to rely on the remote camera indication of the refuel pool level – and they read it incorrectly. The NRC correctly called this safety breach "more than minor" because it "affected the likelihood of causing a loss of reactor water inventory to the point that shutdown cooling could be lost."
- Millstone Unit 3 suffered repetitive failures of leakage tests for vital water systems. Over a span of eight years – including three years of Dominion operations – the same known failure mechanism resulted in a 50 per cent failure rate for critical check valves.
- Dominion allowed Millstone's "high-range" radiation monitor – key to measuring radiation doses to the public – to become seriously degraded.
- On April 4, while Dominion was preparing to remove the reactor vessel head at Unit 3, an overhead crane malfunctioned, causing significant damage to a critical lifting rig and damaging personnel safety equipment.
- On April 14, workers discovered that a fuel assembly "had moved several inches upon coming out of the core and would not travel into the mast without causing an overload condition."
- Dominion repeatedly violated Technical Specifications (its formal licensing conditions) throughout 2004. These "Tech Specs" are legal requirements the public has a right to expect will be carried out and enforced.
- An emergency diesel generator output breaker malfunctioned.
- A valve failure led to a high steam flow transient which led to a secondary transient.

- An error occurred in the steam generator flow, leading to alarm response procedures.
- "Excessive" gas vented from the reactor heat removal system.
- Leakage developed in a cooling water system relief valve.
- An emergency diesel generator output breaker malfunctioned.
- Serious discrepancies were noted in systems monitoring control rod positioning.
- NRC inspectors discovered boric-acid buildup on the Unit 3 reactor vessel head worse than what was reported by Dominion.
- Dominion violated the Technical Specifications by failing to properly vent the reactor coolant system and the residual heat removal system. The NRC said the violation was "more than minor" because it had potential to render vital charging pumps inoperable in an emergency.
- Dominion violated its Technical Specifications when an electrical system failure required it to stop reactivity additions to the Unit 3 nuclear reactor; contrarily, operators increased reactivity and heat buildup. The NRC Dominion's failure to cease the reactivity addition with a degraded electrical configuration was a "performance deficiency."
- Operators did not recognize that a failure of a vital inverter made the electrical train inoperable.
- Operators did not understand the potential significance of air found in the discharge piping of the RHR (residual heat removal) system at Unit 3 and their evaluation was not technically supported.
- Operators did not adequately consider the effects of small oil leaks on high head safety injection pumps at Unit 3.

The NRC, in a scathing inspection report, concluded that Dominion failed to address degraded conditions at Millstone in 2004.

The NRC inspectors "found a lack of rigor by Dominion related to both the understanding of the effects of degraded conditions and the technical bases used to evaluate degraded conditions . . . resulting in violations [of Millstone's licensing requirements]."



The blistering NRC inspection reports demonstrate that Dominion is routinely operating Millstone in violation of its legal requirements and endangering the public on a daily basis.

Nevertheless, despite these findings, the NRC *praised* Dominion's "good performance" during 2004 and said it warranted *reduced* NRC inspections in 2005 and 2006.

The NRC's conduct is beyond disturbing. Consider this:

On December 31, 2004, the NRC completed a special inspection of Dominion's fire protection system. The NRC inspectors randomly chose six areas to inspect at Unit 2. One was the turbine building. The NRC reported : "No findings of significance were identified."

On January 14, 2005, just two weeks later, a fire broke out in the Unit 2 turbine building. That fire caused an unprecedented all-site evacuation by non-emergency personnel. That fire also disabled Millstone site security: as a result of the January 14 fire, Dominion lost control over its perimeter fence and lost its ability to exclude intruders and keep track of personnel movement within the nuclear plant. The fire – and the NRC inspectors' failure to detect the fire hazard which led to the fire – exposed the people of Connecticut to the worst known security breach in the history of the state.

Dominion operated Millstone in the year 2004 as though no one was watching and no one cared