

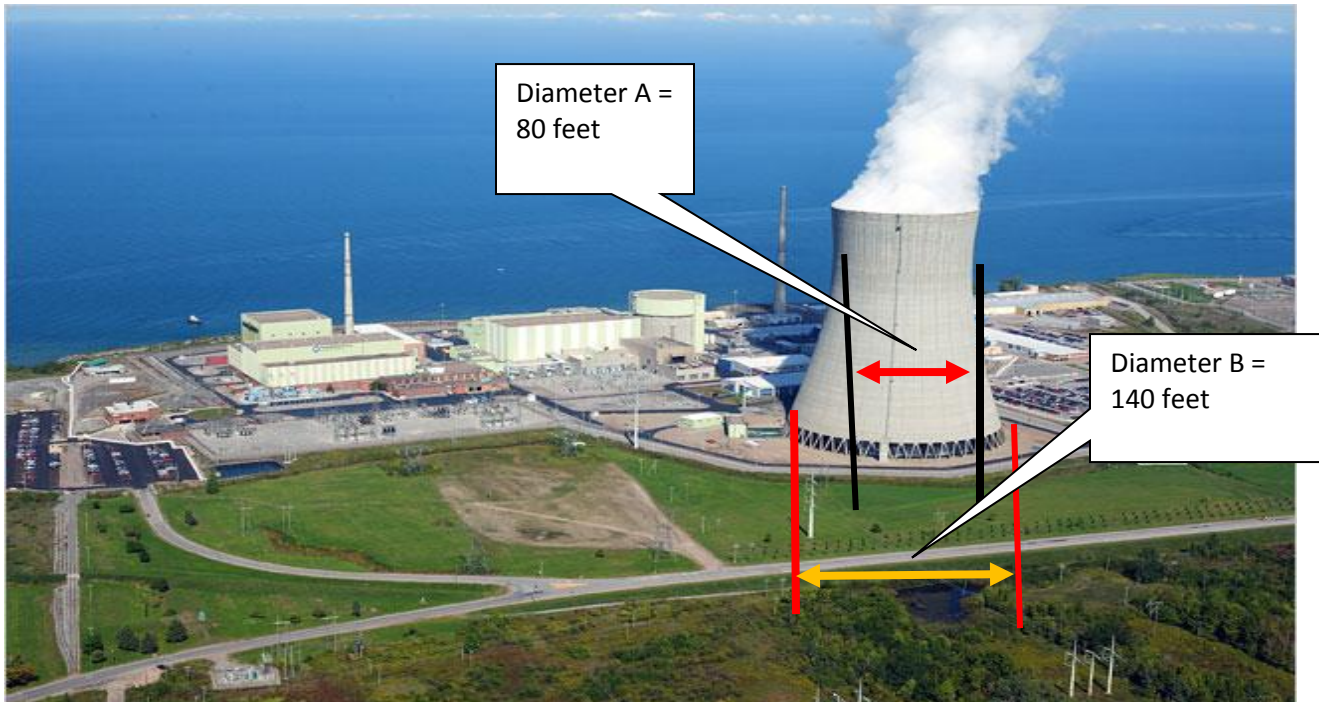
Fluids

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Berkshire Unit in Deal for Troubled Power Supplier [Warren](#)

[E. Buffett](#) proved on Thursday that he still has an appetite for deal-making, just not in the financial and insurance sectors that have been decimated by the credit crisis.



The Nine Mile Point nuclear plant in Scriba, N.Y., owned by Constellation Energy, which MidAmerican Energy plans to buy. Scriba N Y is on the east side of Lake Ontario north of Oswego, N.Y.

MidAmerican Energy Holdings, a division of Mr. Buffett's [Berkshire Hathaway](#), tentatively agreed to pay \$4.7 billion for [Constellation Energy](#), a wholesale supplier of power whose stock has plummeted amid concerns about its bad energy trading bets. The Constellation deal is the latest in a string of transactions that Mr. Buffett, often called the Oracle of Omaha, has participated in over the last year. It is also yet another purchase that steers clear of the financial services industry, a sector that he so far has actively avoided

Preliminary: Cooling towers are perfectly safe. They just cool very hot water coming off the generator turbines which are turned by super heated steam at temperatures & pressure(gauge) as high as 1500 F^0 & 3200 lb/in^2 . This very hot water enters the bottom (diameter 140 ft.) of the cooling tower and turns to water vapor (a gas). Then due to convection the water vapor rises up the tower with increasing velocity due to the diameter reducing to as much as 80 feet(see graphic above). When the water vapor in the gaseous state emerges at the top of tower in condenses (from cooling[heat from vapor goes into cooler air] with the external air) into droplets of water and appears as a cloud as expected.

Question: Using the equation of continuity for fluid flow ($V_1A_1 = V_2A_2$), find the % increase in the velocity of the water vapor doing from diameter A to diameter B? **Answer:** $\sim 306\%$ or $V_{\text{narrow part of tower}} = \sim 3.06 V_{\text{wide bottom of tower}}$