

GOOD SCIENCE Vs UNCERTAIN REGULATORY GUIDANCE or HOW CHI/Q AFFECTS NUCLEAR SAFETY

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For many years in the nuclear industry the calculation of Chi/Q was a dry subject that was limited to meteorologists and health physics types that performed dose calculations. With the publication of NUREG/CR-5055 in 1988 the door was opened to calculating more realistic Chi/Q's. This was further developed with the introduction of ARCON-95 and then ARCON-96. Many people in the nuclear industry did not realize the impact ARCON-96 could have when it was first introduced. This was because about the same time NUREG-1465 or as it became known, "the new source term", was introduced. At Clinton Power Station a team was formed to review potential cost savings from the new source term in 1996. The team discovered that the new CHI/Q's had an even larger potential impact. This paper will summarize those results, review the regulatory uncertainties, discuss what Draft Regulatory Guide, DG-111 covers and what it does not. The paper will also look to the future and what the new CHI/Q's could mean for nuclear safety.