

39c Insuring Safe Pilot Plant Operation

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Pilot plants and University Ops Labs generally use small scale equipment, as well as small volumes of reactive chemicals. Due to their small scale and the small volume of reactive chemicals, safety orientation and review of safety hazards may be slighted or eliminated during a restart or during operation. In industry, the exceptional experience level of a pilot plant technician may also lead to relaxed safety orientation and safety hazard review. The opposite is true for University Ops Labs: the students are inexperienced and not very knowledgeable with respect to reactive safety hazards or the risk of operating equipment larger than that found in a chemistry laboratory. Also, both the students and the Ops Lab instructor are time constrained --- they want to finish their projects before semester end. For these reasons, safety orientation and reactive hazard review may be slighted during the orientation to the Ops Lab course. This paper discusses how Shell insures safe pilot plant operation and how Shell manages and handles highly reactive chemicals at the pilot plant scale.