

**Large-Scale Liquefied Natural Gas Fire Experiment Consolidated Safety Process****Timothy S Stirrup, REM**

**SNL/NM Safety Basis Department 01426**  
**Sandia National Laboratories, NM**  
**Mail Stop 0794**  
**Albuquerque, NM 87185-0794**  
**(505) 845-7155**

A consolidated process was used to meet both Occupational Safety & Health Administration (OSHA) Process Safety Management (PSM) and Sandia National Laboratories, New Mexico (SNL/NM) safety basis (SB) requirements. The Large-Scale Experimental Complex (LSEC) at SNL/NM performed an experiment to analyze fire consequences from large scale releases of liquefied natural gas (LNG). Because the quantity of flammable material in these tests exceeds the OSHA Process Safety Management (PSM) threshold of 10,000 pounds of flammable liquid, this experiment fell under the PSM rule (29 CFR 1910.119) and a process hazard analysis (PrHA) was required to meet PSM requirements. This experiment was also classified as a moderate hazard activity which required a safety assessment (SA) for the SNL/NM safety basis documentation. In order to satisfy both of these safety documentation requirements, a PrHA document was developed that met the requirements for the safety basis document. In addition, OSHA PSM required a prestartup review (PSR) and the SNL/NM safety basis process required a readiness assessment (RA). The consolidated process to address OSHA PSM and SNL/NM SB requirements streamlined project documentation and required reviews while meeting the applicable requirements.