



THE FIRE PROTECTION RESEARCH FOUNDATION

REQUEST FOR PROPOSALS FOR PROJECT CONTRACTOR

Separation Distances in NFPA Codes and Standards

March 10, 2014

Background: Many NFPA codes and standards, in particular NFPA 400, *Hazardous Materials Code*, specify separation/clearance distances for hazardous chemical storage and processes from other equipment and occupied buildings. Many of these requirements have historical undocumented origins. Guidance, which may inform a sound technical basis for adjusting these distances, has been requested by NFPA Technical Committees. There are a number of methodologies in the literature, both risk and hazard based, which are used in the chemical safety process safety field that may be relevant to the calculation of these distances.

Research Goal: The purpose of this project is to provide guidance to NFPA technical committees on methodologies to develop technically based separation/clearance distances for hazardous chemical storage/processes and their application to the chemical storage and processes. The specific focus of the project is those hazards within the scope of NFPA 400.

Project Tasks:

1. **Task 1: Review Methodology Review.** Building on a literature review previously conducted by the Foundation, compile available risk and hazard based methods for determining separation distances in the storage and processing of hazardous chemicals.
2. **Task 2: Case Studies.** With guidance from the Project Technical Panel, select one or more of the hazard scenarios and associated separation distances specified in NFPA 400 as case studies. Conduct assessments using the methods identified in Task 1, identifying specific scenarios, configurations, and any relevant risk and hazard assumptions. Analyze results and identify the strengths and weaknesses of each of the methods for the given applications.
3. **Task 3: Final Report.** Prepare a report of all findings with recommendations related to methodologies that may be appropriate to the development of technically based separation distance requirements in NFPA codes and standards.

Implementation: The research program will be conducted under the auspices of the Fire Protection Research Foundation in accordance with Foundation Policies and will be guided by a Project Technical

Panel of industry stakeholders who will provide input to the project, recommend contractor selection, review periodic reports of progress and research results, and review the final project report.

Reporting and Deliverables: The project contractor will provide periodic reporting and communication on all project tasks to the Project Technical Panel and will prepare the following deliverables: a report on Task 1, and draft and final project reports. The contractor will present the findings to the NFPA Technical Committee or via webinar upon request.

Intellectual Property: The Research Foundation will retain rights to the project report, which will be published on the Foundation website.

Schedule and Cost:

Proposals Due:	April 5, 2014
Selection of Contractor:	April 15
Task 1 Report:	June 30
Draft Final Report:	September 1
Final Report:	October 15

This is a fixed price project in the amount of \$25,000.

How to Respond: Letter proposals (not to exceed six pages) shall be submitted electronically to Kathleen Almand, Executive Director of the Foundation, at kalmand@nfpa.org no later than 5:00 p.m. Eastern time April 5, 2014. For additional details see “[Research Project Guidelines for Contractors](#)” on the FPRF website: www.nfpa.org/Foundation. Each proposal shall include a description of the following, which will be used as the basis for proposal evaluation: prior relevant experience and personnel expertise; and scope and approach. This is a fixed price project in the amount of \$25,000, which includes travel to the in-person meetings.

Note: This project will proceed only on the basis of receipt of a proposal deemed acceptable to the Foundation and the project sponsor(s). Information on the Foundation’s policies for the conduct of research can be found on our website.