

**Quarterly Report # 5**  
**[For the quarter ending 12/31/2005]**

Date of Report: *December 8, 2005*

Contract Number: *DTRS56-04-T-0005*

Prepared for: *U.S.DOT, Research & Special Programs Administration,  
Distrigas of Massachusetts Corporation*

Project Title: *“Modeling and Assessing a Spectrum of Accidental Fires and  
Risks in a LNG Facility”*

Prepared by: *Technology & Management Systems, Inc.*

For quarter end period *December 31<sup>st</sup>, 2005*

**PUBLIC PAGE**

In this quarter (# 5) the focus of work was on the following items:

- 1 The (further) modeling and description of radiative characteristics of large turbulent, diffusion LNG pool fires and the development of a technical paper for submission to a peer reviewed journal were continued.
- 2 Hitherto unpublished data from the 35 m diameter LNG fire tests conducted in 1987 were obtained (in part) recently. These data have been used to compare the large LNG Fire Model results. Also, in some cases the model parameters have been fine tuned with the data received.
- 3 Development of the computer codes integrating the fire radiation models developed were also continued.

Computer programs that were developed to determine the locations of contours of constant thermal radiation flux levels on the ground from a fire on top of a LNG storage tank have been exercised for sample cases. Coding of the large fire model into a computer program has been completed. Integration of several different fire sub-models into an overall computerized system was continued and will be completed in the coming months.