

**From:** James Quintiere <jimq@eng.umd.edu>  
**To:** "Christopher Bajwa" <CSB1@nrc.gov> - NMS  
**Date:** Wed, Jan 16, 2002 5:52 PM  
**Subject:** Re: Tunnel Fire Analysis

If you want to know the full spatial temperature variation with time this is CFD calculation, and the region of the fire will not be resolved well. If you wish an approximate spatial result, it might even have more accuracy but not resolution. The size of the leak, the thermal properties, the tunnel geometry and ventilation need to be known. One of my colleagues has a centrifuge that can be used to model the earth load on the tunnel, and fire can be added to this. It is difficult to give you a cost until we narrow down an approach that fits the level of accuracy and resolution that you need.

Jim Quintiere

>Jim,  
>  
>Hello...I am with the USNRC. Your name was mentioned by Joe Kolly  
>at NTSB as someone who might be able to help us.  
>  
>This is exactly what we are looking for:  
>  
>We need an analysis of the Baltimore Tunnel Fire that occurred in  
>July of 2001. We need to analyze the fire produced by a tanker car  
>of Tripropylene leaking out of a small hole in the side of the  
>tanker car, and get a time/temperature profile of the fire out of  
>the analysis to use in another analysis.  
>  
>I would need to know how long it would take for you to do such an  
>analysis and what it would cost.  
>  
>We would provide all necessary information on the tunnel and the  
>tanker car. Please let me know if you can help us. Thanks !  
>  
>-Chris Bajwa  
>USNRC

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