

**Safety of Nuclear Power Plants
Tutorial - Event Tree Analysis
Date: April 24th, 2012**

Figure below represents a fire protection system provided to extinguish any fire which might occur. Water is taken from a reservoir. A fire detecting system is installed to start the pumps. Fire door is also installed to prevent fire spreading. Your task is to help the maintenance personnel to draw an event tree, considering "fire occurring" as the initiating event. You can assume the probability of fire occurring is 0.003.

In this tutorial, please ignore the failure of reservoir and failure of all the pipes.

You may assume following probabilities:

Failure of sensor	0.0001	Failure of fire door	0.0005	Failure of spray	0.001
Failure of valve	0.01	Failure of pump	0.02		

