Team ID:	**Mission Name:**	**Date:**		
Hazard	**Possible Causes**	**Risk of Mishap and Rationale**	**Mitigation Approach**	**Risk of Injury after Mitigation**
Explosion of solid-propellant rocket motor during launch with blast or flying debris causing injury.	1. Cracks in propellant grain; 2. Debonding of propellant from wall; 3. Gaps between propellant sections and/or nozzle; 4. Chunk of propellant breaking off and plugging nozzle; 5. Motor case unable to contain normal operating pressure; 6. Motor end closures fail to hold.	Medium; student-built motor with limited testing and nondestructive evaluation capability.	1. Pressure test motor case (with end closures) to 1.5 maximum expected operating pressure; 2. Visually inspect motor grain for cracks, debonds, and gaps during and after assembly; 3. Use ductile material for motor case (non fragmenting); 4. Inspect motor case for damage during final assembly before launch; 5. Launch crew 200 feet from rocket at launch, behind barrier (vehicle).	**Low**
Recovery system fails to deploy, rocket or payload comes in contact with personnel.	1. Avionics failure; 2. Tender descender failure; 3. Material rupture.	Medium; student-built recovery system with limited testing.	1. Visually inspect the cords; 2. Ground testing; 3. Only essential personnel in launch crew.	**Low**
Rocket does not ignite when a command is given (“hang fire”), but does ignite when team approaches to troubleshoot.	1. Igniter failure.	Low; student-built tested more than 10 times without failure.	1. Ground testing	**Low**