Milestone Review Flysheet

PDR, CDR, FRR

Institution Name	Northwest Indian College

Milestone	CDR

Vehicle Properties	
Diameter (inches)	5.54" to 4"
Length (inches)	93.46"
Gross Liftoff Weight (pounds)	16.43 lbs
Launch lug/button size	Rail Buttons 0.5"
Motor Retention Method	2 #12 1 1/2" bolts in T-nuts

Motor Properties	
Motor Manufacturer(s)	Cesaroni Technologies Inc
Motor Designation(s)	K660 Classic
Max, Average Thrust (Newtons)	660.537
Total Impulse (Newton-seconds)	2437.38
Mass before/after burn (pounds)	4.26/1.61

Stability Analysis	
Center of Pressure (inches from nose)	65.33
Center of Gravity (inches from nose)	56.92
Thrust-to-Weight Ratio	12.7:1
Rail Size/Length	72"
Rail Exit Velocity (feet/second)	71.49 f/s

Ascent Analysis	
Max Velocity (feet/second)	793.71
Max Mach Number	0.71
Max Acceleration (feet/second^2)	15.06 g's
Peak Altitude (feet)	5361.42

Recovery System Properties	
Drogue Parachute	
Manufacturer/Model	LOC/Precision
Size	18"
Altitude at Deployment (feet)	Apogee - 5,280'
Velocity at Deployment (feet/second)	31.9

Recovery System Properties	
Main Parachute	
Manufacturer/Model	LOC/Precision
Size	78"
Altitude at Deployment (feet)	500
Velocity at Deployment (feet/second)	97
Velocity at Landing (feet/second)	21.93

Recovery System Properties	
Electronics/Ejection	
Altimeter(s) Make/Model	PerfectFlite MAWD
Redundancy Plan	2nd PerfectFlite MAWD under separate power and wiring
Pad Stay Time (Launch Configuration)	1 hr

Recovery System Properties	
Electronics/Ejection	
Rocket Locators (Make, Model)	Garmin Astro 220
Transmitting Frequencies	151.82 MHZ, 151.88 MHZ, 151.94 MHZ, 154.57 MHZ, 154.60 MHZ
Black Power Mass Main Parachute (grams)	Drogue - 1.1/1.3 primary/secondary
Black Power Mass Main Parachute (grams)	1.9/2.1 primary & secondary

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Payload/Science	
Succinct Overview of Payload/Science Experiment	Measure atmospheric temp, humidity, baro pressure, solar irradiance, ultraviolet radiation. Measure rocket roll & science payload bay internal temp
Identify Major Components	4 micro controller boards and respective sensors
Mass of Payload/Science	4 lbs estimated

Test Plan Schedule/Status	
Ejection Charge Test(s)	11/5/2010
Sub-scale Test Flights	11/6/2010
Full-scale Test Flights	Low Altitude - 12/5/10, 1/29/11; High altitude 2/29/11, 3/7/11, 3/27/11

Additional Comments