

National Association of Rocketry
Board of Trustee Minutes
Kenosha Wisconsin
March 9-10, 2006

March 9, 2006

Present are Ted Cochran, Jay Apt, John Lyngdal, Jennifer Ash-Poole, Joyce Guzik, George Rachor, and Mark Bundick. Due to a family emergency, Treasurer Stewart McNabb was unable to attend and present financials. Financial statements will be distributed and reviewed by the board after the meeting.

9 PM – Call to order

Administrative matters

Motion by Mark Bundick :

The president submits the name of Tom Ha to be as Chairman of NARTS
Appointment carries unanimously

Motion by Mark Bundick:

The president submits the name of Jim Flis to be Chairman of Joint Manufacturer
Association Council.
Motion carries unanimously

By Laws Changes ---

Motion by Joyce Guzik: Seconded by Jay Apt

3 bylaws amendments were presented to the board for consideration.

Proposal #1:

Change Article XI, Section 2, (i), from:

"(i) National Association of Rocketry's Annual Meet Committee (NARAM),"

to

"(i) National Events Committee"

Change Article XI, Section 11 from:

"Section 11: The National Association of Rocketry's Annual Meet Committee (NARAM Committee) shall have as its duties the organization and administration of the budget of the National Contest and National Convention (NARAM). Members of this Committee shall include the chairman of the Contest and Records Committee, the National Contest Director, and the National Convention Director."

to

"Section 11: The National Events Committee shall have as its duties the organization and administration of the Association's National Events, including, but not limited to the National Convention (NARCON), National Sport Launch (NSL) and National Contest

(NARAM). Members of this Committee shall include the chairman of the Contest and Records Committee and each of the directors of the next approved National Events."

Proposal #2:

Change Article XI, Section 2, (l) from:

"(l) the American Spacemodeling Committee"

to

"(l) Periodicals Committee"

change Article XI, Section 14 from:

"Section 14: The American Spacemodeling Committee shall have as its duty the editing and publication of the Association's Journal, American Spacemodeling."

to

"Section 14: The Periodicals Committee shall have as its duty the editing, publication and distribution of the Association's regular publications, including, but not limited to, Sport Rocketry and The Model Rocketeer."

Proposal #3: To amend Article XI: Other Committees to make permanent the Special Safety Committee by making the following changes:

1. Add to Article XI, Section 2 the following:

"(m) Safety Committee"

2. Strike from Article XI, Section 4, the following:

", the establishment and revision of the Safety Code(s) of the Association,"

3. Renumber Article XI, Sections 15 and 16 to Section 16 and 17 respectively,

4. Reinsert Article XI, Section 15 as follows:

"Section 15: The Safety Committee shall have as its duties collection of safety data, analysis of any significant range safety incidents, periodic review and improvement of recommended range procedures and operations in light of safety data, safety education and communication of improved practices to Association members, and recommendation of changes to NFPA Codes 1122, 1125, 1127 or NAR Safety Codes to the NAR Board of Trustees."

These amendments will be presented to the membership for ratification vote at the NARAM 48 Association meeting.

These amendments will be presented to the membership for ratification vote at the NARAM 48 Association meeting.

The President reviewed the collection process around individual committee Procedures, and asked Trustee liaisons to complete that task by the NARAM meeting. He will provide a sample outline to assist in documenting them.

Trip Barber joined us at 9:20 PM

Committee procedures

Motion by Jay Apt: Seconded by John Lyngdal
Motion to create Special committee on Technology
Motion carries unanimously.

Motion by Ted Cochran: Seconded by Joyce Guzik
Motion to appoint Jennifer Ash-Poole as chair for the technology committee.

Motion passes unanimously

Policy Review – The secretary presented the results of his ongoing work to collect in one spot the policies currently in effect for the NAR. Some of the items in the list are obviously obsolete, and will need to be rescinded. The Board will review a final compilation at NARAM, and approve or rescind as required. The revised policy list will be posted to the NAR website and incorporated into introductory packet of materials for new Board members.

11 PM – adjourn for the evening

8 AM March 10, 2006

Member Needs and Concerns

Old Engine Testing - The Board considered a request from John McCoy to test aged motors in an effort to get baseline data on engine performance after aging. John's offer was in consideration of placing back on the certified engine list motors no longer in production. Trustees pointed out that manufacturers bear liability burdens around motors, and that manufacturer concurrence for support of the motors was a critical element toward restoring certification. Without such support, recertification would be impossible. Manufacturers can ask the NAR to decertify any motor on request. Such requests were done when it was discovered that specific lots of motors were subject to unusually high failure rates. In light of manufacturer issues, the Board declined to direct S&T to perform the tests, but remind members they are free to fly uncertified motors outside the bounds of their NAR activities.

National Events Range Reviews - Steve Lubliner asked the Board to have a range review done prior to flying at National events. Trip Barber will distribute to the NSL and NARAM directors a checklist to use in this process.

Electronic Package Standards - Steve Lubliner asked the Board to consider developing and implementing electronic package standards for HPR models. The new HPR safety code requires positive interruption of electrical energy to systems used to ignite motors and service pyrotechnics. Many electrical systems, both commercial and homemade, are quite adequate to protect safety, and there are many different variations possible to create safe vehicle electronics. It wasn't obvious what testing method or standards creation methodology should be used to set standards. After discussion, the Board felt it would be better at this time to implement the new Safety Code, and monitor field reports of

incidents to the Safety Committee. Collecting best practices from the field will also be considered by the Safety Committee.

Specific Publication of Financials and Minutes - The Board agreed with Terry Dean's request to formalize the reporting of NAR financial statements. The year end financials will be made available after the mid-year meeting usually held either February or March of each year. Additionally, the Board will also make available the meeting minutes within the 60 day time period specified in the By-Laws.

MESS Report Requirement - The Board declined a request to mandate MESS reporting from NAR events; such a requirement would be difficult to enforce. S&T will be asked to continue promoting MESS as a tool to spot engine problems.

Delay Times for Contest Certified Motors - The Board declined to act on a request from Bob Kaplow to demand delay time data from Tripoli's TMT. Members are reminded that NAR policy says we agree to allow for use on NAR ranges motors certified by other organizations.

US Team Practice with Uncertified Motors - US Spacemodeling Team Manager John Langford asked the Board to allow use of foreign and specialty motors upon approval of the NAR President at Team Practice sessions. US Teams previously competed at a severe disadvantage to foreign competitors due to lack of opportunities to practice with FAI competition motors. The Board reviewed the testing protocols used by the FAI prior to World Championship events. Such testing is certainly rigorous enough to insure both performance and safety. The Board approved the request by unanimous vote.

Motion by Jay Apt: Seconded by Joyce Guzik

The NAR board of trustee's authorizes selected members of the US Internat team to allow use of foreign and specialty motors upon approval of the NAR President at Team Practice sessions.

Motion approved.

Cooperation on EX Launches - Al Gloer asked the Board to develop a strategy or policy relative to NAR sections that jointly affiliate with organizations supporting experimental or research motor activity. The Board reiterated the policy that only certified motors are permitted for use on NAR ranges. Use of research or experimental motors on ranges may put launch sites at risk if land owners do not understand the difference between certified and uncertified motor operations. NAR Sections who are also engaged in research motor use on their field under other organizations are encouraged to make clear to land owners which activity is being covered by the respective insurance policies.

Contest Board Administration of Motor List - Chad Ring asked the Board to transfer responsibility for Contest Engine list maintenance from Standards and Testing to Contest and Records. While the Board noted the administrative problems transferring the list

maintenance between committee members, they did not feel that administrative issues in one transfer justified shifting responsibility for the list.

Membership Statistics Review - Membership between 2004 and 2005 was flat; the NAR had a net gain of one section. The Board requested additional information for future meetings on sections by age, section losses as a function of their age, continued review of TARC effects on membership and membership gender breakdowns.

Website Review - The NAR website use did not grow in 2005. Popular document downloads included educational resources and engine data. Those documents should be rebranded to advertise the NAR directly. We also need more direct links from other websites to increase traffic. Reciprocal links may lead to broader partnership agreements with organizations.

Education discussion – Vince Huegele

Educator cd

Educator newsletter

4h / tarc

Motion by Ted Cochran: Seconded by Trip Barber
The HPR Safety code shall be reissued as follows:

High Power Rocket Safety Code

1. **Certification.** I will only fly high power rockets or possess high power rocket motors that are within the scope of my user certification and required licensing.
2. **Materials.** I will use only lightweight materials such as paper, wood, rubber, plastic, fiberglass, or when necessary ductile metal, for the construction of my rocket.
3. **Motors.** I will use only certified, commercially made rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer. I will keep smoking, open flames, and heat sources at least 25 feet away from these motors.
4. **Ignition System.** I will launch my rockets with an electrical launch system, and with electrical motor igniters that are installed in the motor only after my rocket is at the launching or prepping area. My launch system will have a safety interlock that is in series with the launch switch that is not installed until my rocket is ready for launch, and will use a launch switch that returns to the "off" position when released. If my rocket has onboard ignition systems for motors or recovery devices, these will have safety interlocks that interrupt the current path until the rocket is at the launch pad.
5. **Misfires.** If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its

- battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
6. **Launch Safety.** I will use a 5-second countdown before launch, and will ensure that everyone in the launch site is paying attention and that no person is closer to the launch pad than allowed by the accompanying Minimum Distance Table. I will check the stability of my rocket before flight and will not fly it if it cannot be determined to be stable.
 7. **Launcher.** I will launch my rocket from a stable device that provides rigid guidance until the rocket has attained a speed that ensures a stable flight, and that is pointed to within 20 degrees of vertical. If the wind speed exceeds 5 miles per hour I will use a launcher length that permits the rocket to attain a safe velocity before separation from the launcher. I will use a blast deflector to prevent the motor's exhaust from hitting the ground. I will ensure that there is no dry grass within a clear distance of each launch pad determined by the accompanying Minimum Distance table, and will increase this distance by a factor of 1.5 if the rocket motor being launched uses titanium sponge in the propellant.
 8. **Size.** My rocket will not contain any combination of motors that total more than 40,960 N-sec (9208 pound-seconds) of total impulse. My rocket will not weigh more at liftoff than one-third of the certified average thrust of the high power rocket motor(s) intended to be ignited at launch.
 9. **Flight Safety.** I will not launch my rocket at targets, into clouds, near airplanes, or on trajectories that take it directly over the heads of spectators or beyond the boundaries of the launch site, and will not put any flammable or explosive payload in my rocket. I will not launch my rockets if wind speeds exceed 20 miles per hour. I will comply with Federal Aviation Administration airspace regulations when flying, and will ensure that my rocket will not exceed any applicable altitude limit in effect at that launch site.
 10. **Launch Site.** I will launch my rocket outdoors, in an open area where trees, power lines, buildings, and persons not involved in the launch do not present a hazard, and that is at least as large on its smallest dimension as one-half of the maximum altitude to which rockets are allowed to be flown at that site or 1500 feet, whichever is greater.
 11. **Launcher Location.** My launcher will be at least one half the minimum launch site dimension, or 1500 feet (whichever is greater) from any inhabited building, or from any public highway on which traffic flow exceeds 10 vehicles per hour, not including traffic flow related to the launch. It will also be no closer than the appropriate Minimum Personnel Distance from the accompanying table from any boundary of the launch site.
 12. **Recovery System.** I will use a recovery system such as a parachute in my rocket so that all parts of my rocket return safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
 13. **Recovery Safety.** I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places, fly it under conditions where it may recover in spectator areas or outside the launch site, or attempt to catch it as it approaches the ground.

MINIMUM DISTANCE TABLE				
Installed Total Impulse (Newton-Seconds)	Equivalent Motor Type	Minimum clear Dimensions (ft.)	Minimum Personnel Distance (ft.)	Minimum Personnel Distance (Complex Rocket) (ft.)
0 -- 320.00	H or smaller	50	100	200
320.01 -- 640.00	I	50	100	200
640.01 -- 1,280.00	J	50	100	200
1,280.01 -- 2,560.00	K	75	200	300
2,560.01 -- 5,120.00	L	100	300	500
5,120.01 -- 10,240.00	M	125	500	1000
10,240.01 -- 20,480.00	N	125	1000	1500
20,480.01 -- 40,960.00	O	125	1500	2000

Note: A Complex rocket is one that is multi-staged or that is propelled by two or more rocket motors

Motion carries....

Motion to adjourn by Jennifer Ash-Poole: Seconded by John Lyngdal

Motion carried