

## **Minutes of the NAR Board of Trustees Meeting, Goodyear, AZ, July 28-31, 2006**

July 28, 2006, 5 PM, Meeting called to order:

Present are Jennifer Ash-Poole, Trip Barber, Mark Bundick, Ted Cochran, Joyce Guzik, John Lyngdal, Stuart McNabb, George Rachor. Excused is Jay Apt.

### Administrative Items

The Board approved the minutes of the Kenosha, WI meeting after one correction. (Moved by Barber, seconded by Lyngdal; Unanimous, with one abstention by McNabb)

The Board accepted the action of the Executive Committee Action on FAI Agreement with AMA. (Moved by Cochran, seconded by McNabb - Unanimous)

### Member Needs and Concerns

#### Changes to Section of the Year (SOTY)

Craig Saunders, [crs@mtrad.com](mailto:crs@mtrad.com), proposed a number of changes to the Section of the Year Award. The Board reviewed other recent changes in the award, including expanding it to three levels to reflect different sized sections. The Board also noted that the Section Activities Committee was to receive a new chairman, who'd indicated his interest in reviewing and changing the award. A motion passed to refer items 1,3 and 4 to the incoming chairman, and to report back to the Board at its Winter 2007 meeting on their recommendations. SAC will also be directed to publish all SOTY data for review by sections. (Moved by Cochran, seconded by Rachor – Unanimous)

#### Proposals to Improve NAR Marketing

Craig R. Saunders, [crs@mtrad.com](mailto:crs@mtrad.com), presented four proposals for marketing programs, including automatic distributions of the tri-fold brochure, etc. One proposal involved new flyers acknowledgement, by collecting information about new flyers who participate in a local NAR Section, then sending them a promotional packet of information designed to convert them to NAR membership. A motion then passed to refer items 1, 3 and 4 to the membership committee, and to provide a \$500 budget to seed a pilot program of the type described, assuming Craig would volunteer to run it under the Membership Committee with an interim report at the Winter 2007 meeting, and a final report, including a report of the number of such new flyers converted to NAR membership. (Moved by Cochran, seconded by Ash-Poole - Unanimous)

#### Proposal to Fix the NAR Website

A proposal to make changes to the NAR website submitted by Craig R. Saunders, [crs@mtrad.com](mailto:crs@mtrad.com), was referred to the Special Committee on Technology, Jennifer Ash-Poole, Chairman. (Moved by Cochran, seconded by Rachor - Unanimous)

#### Proposal to Require Electronics Use for Level 2 Certification

Aaron Stanley, [rocketguy1317@comcast.net](mailto:rocketguy1317@comcast.net), was tabled pending discussion by a joint team of NAR and TRA members to review HPR user certification requirements. (Moved by Cochran, seconded by Rachor - Unanimous)

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### Clarification of Hybrid Motor Policy

Carl McLawhorn, [carl@forvus.com](mailto:carl@forvus.com) asked the Board to reconsider its acceptance of a TRA originated policy regarding G and smaller hybrid rocket motors. In reviewing NFPA codes, Carl believed a portion of that policy which permits G or smaller hybrids to be flown without HPR user certification was in violation of NFPA requirements. NFPA 1125 does not provide for certification of model rocket hybrid motor; therefore they must be HPR motors with appropriate user certification applied. The Board approved a motion to the portion of the policy that permitted G and smaller hybrids to be flown without user certification. The President will conduct followup discussion with TRA President Ken Good to work to resynchronize the two organization's policies. (Moved by Barber, seconded by Lyngdal - Unanimous)

### FAI Motor Reciprocal Certification

Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the Board to delegate to NAR S&T the task of determining if FAI motors meet the requirements for reciprocal certification. The Board noted that the NAR cannot make motor manufacturer submit motors for certification testing; that is a voluntary action of the manufacturer. However, the Board did pass a motion to delegate S&T the task to determine what would be required for FAI certified motors for reciprocal certification. (Moved by Barber, seconded by Cochran - Unanimous)

### Disciplinary Action Against NAR Board of Trustees

Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the Board to appoint a committee to take disciplinary action against those trustees that voted to allow members to violate the Safety Code and those members that flew uncertified motors. The President determined the request was out of order. The NAR By-Law provide for discipline under Article XX, Section 11, and such action can only be initiated by the President. The member will be asked to submit the request in writing.

### Contest Motor Certification Items

Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the NAR Board to require complete certification data, including standard deviation for total impulse, and actual delay values be published for all contest certified motors, and that contest motor certification classifications be returned from certification at their mean total impulse to the previous standards (mean total impulse plus one standard deviation). The Board voted to refer the request to Standards and Testing. (Moved by Barber, seconded by Cochran – Unanimous)

### Unconventional Rockets

Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the Board to issue a ruling to members about flying "unconventional" powered models at NAR events (e.g., Estes Hydrogen rocket, Air Rockets, Water Rockets). The item was referred to the Safety Committee (Moved by Barber, seconded by McNabb - Unanimous)

### Model Rocket Hybrid Motors

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Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the Board to request the NFPA representative to make the necessary change to the model rocket codes to allow for model rocket hybrid motors that do not require user certification. The Board noted that NFPA 1122, the Code for Model Rockets, does not recognize a hybrid model rocket motor. Within NFPA 1125, the Code for High Power Rockets, does define hybrid rockets, but require HPR user certification. Code 1122 will come up for revision in 2010, and Code 1125 will come up for revision in 2009.

### Website

Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the Board to examine the NAR web site. The Board voted to refer the matter to the Special Committee on Technology. (Moved by McNabb, seconded by Cochran - Unanimous)

### National Event Hotel Arrangements

Bob Kaplow, [KAPLOW\\_R@Encompasserve.org](mailto:KAPLOW_R@Encompasserve.org), asked the Board to implement an NAR policy that we will not use RAMADA hotels for our national events. The matter was referred to the National Events Committee.

### Various Policy and Procedure Requests

David Erbas-White, [derbas@arachneering.com](mailto:derbas@arachneering.com), submitted a variety of proposals regarding motor certification.

A proposal to change motor code labeling would have placed NAR standards outside the NFPA standards. The Board declined to take any action.

Proposals to change procedures for motor decertification and corresponding changes to the motor certification list notations were postponed until the Board considered other items on the agenda. (Moved by Cochran, seconded by Ash Poole - Unanimous)

The Board declined to act on a proposal to permit production lot decertification based on MESS data, since MESS data may not necessarily tell S&T what the underlying root cause of failures is.

By motion and vote, the Board refer to S&T, with a report due at the 2007 Winter Board meeting, the following proposals: (Moved by Cochran, seconded by McNabb - Unanimous)

- Permit decertifications based on design flaws and fraudulent lot labeling;
- Modify and publish S&T's policies was referred without vote to S&T;
- Modify existing cross certification recognitions with other organization.

### Changes to Level 3 Requirements

Alex Mericas, [alex-mericas@austin.rr.com](mailto:alex-mericas@austin.rr.com), requested the Board of Trustees consider a change to the NAR L3 Certification Requirement 2.4, concerning disarming pyrotechnics in Level 3 rockets. The Board directed the President to review the matter with the Level 3 Certification Committee (L3CC), and request a formal vote on the proposed change.

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### HPR Safety Code Questions

David W. Schultz, [david.schultz@earthlink.net](mailto:david.schultz@earthlink.net), provided suggested changes to the NAR HPR Safety Code. The Board reviewed these matters as part of the Safety Committee report.

### Proposed New Motor Decertification Policy

Bill Spadafora, [billspad@comcast.net](mailto:billspad@comcast.net), provided suggested changes to NAR motor decertification policies. The Board reviewed these matters as part of the Safety Committee report.

### Policy Review – US Team Use of Special Motors

Greg Cisko, [gcisko@hotmail.com](mailto:gcisko@hotmail.com), asked the Board to reconsider its March 2006 action allowing FAI motor use by the US Spacemodeling Team. The Board reviewed these matters as part of the Safety Committee report.

### Other Non Committee Matters

#### NAR Certification Disclaimer

As a byproduct of discussion on various engine certification matters, the President proposed development of a legal warranty disclaimer. The Board voted to agree in principal but asked that appropriate legal counsel review the proposed document for final approval at the Winter 2007 meeting (Moved by Cochran, seconded by Rachor – Unanimous)

#### Affiliation with Fireworks Alliance

John Steinberg, Executive Director of the Fireworks Alliance, [jrsrocket@aol.com](mailto:jrsrocket@aol.com), asked the NAR Board to consider a formal alliance with this organization. The Board expressed concern regarding the possible public and safety official perception of such action, and took no action.

Membership Statistics Review - The Board noted an increase of 120 members over the past year. Section recruiting and Sport Rocketry continue to work as good recruiting sources. Stew McNabb noted that perhaps our membership levels are not as dependent on getting people to join as they would be in keeping those who do join. He suggested trying an experiment to get people more involved in NAR activities as a means to improve membership retention. The President will work with the Membership Committee to find a way to mail "service program reminders" to members during their first year of membership, and report results to the Board.

#### Financial Review

Stew McNabb, NAR Treasurer, [smcnabb@eastnc.twcbc.com](mailto:smcnabb@eastnc.twcbc.com), [smcnabb@ec.rr.com](mailto:smcnabb@ec.rr.com), reviewed the financial reports with the Board. 2005 ended with a net increase of \$15,000. Cash flow improved due to a concerted effort to collect Sport Rocketry ad receivables. Stew and Todd Schweim worked to create a new, coordinated process using

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QuickBooks Online that actually works better with less effort for both of them and NAR HQ.

Stew reported he's close to being able to close all accounts open in Shakopee , WI and Arkansas, and complete the HQ move to Iowa. He's investigating other investment brokers for our longer term investment accounts (T. Rowe Price, Charles Schwab, J. P. Morgan, Fidelity). Stew reported on the potential options and costs of an Association audit; an audit would be quite expensive (\$7,500+), so he'll continue to investigate other options for Board consideration.

Stew has investigated section needs to "piggyback" off our IRS exemption number. He's working on a group exemption letter that would meet both Section needs and IRS requirements. Sections would have to tell HQ every year that they wish to be included on the group exemption, a process we could incorporate into renewals. For donations, we need to make sure that a required acknowledgment letter would be sent for any individual donation of \$250 or more. Stew will continue work on this with the goal to have things ready in time for the 2007 Section renewal.

Stew presented a 2006 revised budget, which was approved after the Association meeting. (Moved by Ash-Poole, seconded by Rachor – Unanimous)

In reviewing work done in support of the Special Committee on Technology, the Board suggested creating a "manual of accounting procedure" for the NAR, including financial business continuity planning. A motion to create the manual by NARAM 49, with an interim report at the Winter 2007 meeting was passed (Moved by Cochran, seconded by Lyngdal – Unanimous with McNabb abstaining).

### **Committee Reports and Evaluation**

The President took the Board into Executive Session to review NAR committee reports and personnel.

Out of Executive Session, the committee discussion and work continued.

### **Education Committee**

Vince Huegele has negotiated a "Memorandum of Understanding" between NAR and 4-H. The MOU outlines ways the NAR and 4-H can partner to support one another. Section might provide access to their fields, 4-H members could be exposed to NAR activities, or joint launches could be scheduled. Ad space in publications could be exchanged for rocketry based events. Members could provide judging skills to 4-H contests. Many sections and members already partner in these ways; the MOU would both formalize this activity, and allow both organizations to actively promote it.

While the Board had concerns since the organizations are so vastly different in size (4,500 NAR members vs. 4,000,000 4-H participants), the Board voted to approve the

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agreement, subject to the signatures of both the National 4-H Director and NAR President being affixed (Moved by Cochran, seconded by McNabb – Unanimous).

### Special Committee on Safety

Ted Cochran summarized work done on the HPR safety code, the Water Rocket Safety Code, two Sport Rocketry safety articles, and assisting National Events Chairman Trip Barber with a Range Safety Checklist for national events. Ted reviewed an in-depth post-incident analysis on a rocket containing a cluster of two Ellis Mountain H275 motors. Planning work has begun on an empirical study of the effect of wind and the rocket's rotational moment of inertia on safe launch speed.

Ted presented proposed revisions to the High Power Safety Code which, after discussion and review, were passed by the Board; the current code at the NAR Website contains these revisions. (Moved by Cochran, seconded by Lyngdal – Unanimous)

Ted then presented a proposal for “Alternate Safety Code Compliance ” which, after discussion and review, was approved by the Board (Moved by Cochran, seconded by Barber – Unanimous).

Whereas, the primary purpose of the National Association of Rocketry is to promote the safe pursuit of rocketry, and in that regard the Association has been well-served by its Safety Codes, and

Whereas, the bylaws of the Association further require the Association to "promote an increasingly wide interest in the scientific techniques pertaining to rocketry," "encourage research and experimentation," "strive to promote and improve the image of rocketry with the general public and with all levels of government, "cooperate with all levels of government to the end that non-professional rocket activities may be conducted without undue restriction", and "engage in and encourage organized rocket activities as the Association or the Board of Trustees may from time to time deem necessary or desirable," and

Whereas, on rare occasions, some rocketry activities may be desirable that, although legal and safe, do not unequivocally comply with all aspects of the applicable Safety Code(s), and

Whereas, members may be inhibited from conducting these otherwise desirable activities due to concerns about insurance and/or sanctions, and

Whereas, it is in the best interests of the Association to provide for these activities to be reviewed and permitted, so long as they provide equal or greater safety margins to participants as would otherwise be provided by the Safety Code,

Be it therefore resolved by the Board of Trustees of the Association that:

A procedure shall be established and approved by the Board whereby the Board or its

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designees may review and approve proposals for commensurate methods of compliance with the Safety Code(s) of the Association for activities that may otherwise be perceived to technically violate some portion(s) of the Safety Code, provided:

- The activities are conducted in accordance with applicable laws, and
- The activities, if conducted on behalf of the Association, are consistent with the purposes of the Association and can not otherwise be reasonably achieved, and
- The activities are fully described as to time and place, and alternate methods of compliance enumerated, and
- The alternate methods of compliance provide for equal or greater safety margins as would other obtain from the existing Safety Code.

Be it further resolved that, pending the adoption of a procedure acceptable to the Board of Trustees for reviewing and approving commensurate compliance proposals, such proposals shall be presented to the full Board of Trustees, and require acceptance by two-thirds of those Board of Trustees voting on the proposal in order to be approved.

Be it further resolved that Association members who in good faith apply for, receive, and act in accordance with approval for alternate methods of compliance may not be subject to the sanctions of Section 11 of the bylaws for actions related to the approved activity.

Be it further resolved that Association members carrying out legal activities that are not associated with, sanctioned, nor insured by the Association shall be exempt from the requirements of this procedure.

Given the resolution just passed, the Safety Committee presented three proposals for alternative compliance.

A proposal for “Rotational Inertial Coupling” study by the Safety Committee was approved (Moved by Barber, seconded by Rachor – Unanimous with Cochran abstaining).

A proposal for “US FAI Team Practice with FAI-approved motors” was approved. (Moved by Cochran, seconded by Ash-Poole – Unanimous with Barber abstaining).

A proposal for a study on the “Impact of Motor Age on Motor Safety” was initially not approved (Moved by McNabb, seconded by Lyngdal. Votes for: Barber, Lyngdal, McNabb; Votes against: Rachor; Abstentions: Ash-Poole, Cochran, Guzik). By ruling of the Chair, the motion failed for lack of a majority.

A motion to reconsider the proposal passed (Moved by Barber, seconded by Cochran – Poole abstained).

The proposal was then modified to a 10 launch limit and an interim report due to the Winter 2007 Board meeting, and passed (Moved by Barber, seconded by McNabb – Poole abstained ).

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### Sport Services Committee

Carl Tulanko reported on a variety of administrative work underway, most of which should be complete by year end. He has also begun communication with members of the Tripoli Rocketry Association on jointly revising user certification procedures. The Board vote to approve and immediately implement a revised definition of active recovery which reads as follows:

Active Recovery is the deployment of a primary recovery device that actively changes the physical configuration and dramatically reduces the vertical descent rate of the rocket model when deployed. This device must be of sufficient size, based on the weight of the model, so that the device is capable of safely recovering the rocket. The active recovery device can include parachutes, streamers, helicopter devices, R/C control and any other devices that are physically deployed to provide safe recovery of the model. In the event that dual deployment and secondary recovery devices are used, the deployment of a secondary recovery device must actively change the configuration of the model in order to inhibit ballistic recovery and slow the decent rate so as to allow for safe deployment of the primary recovery device.

Passive Recovery methods such as airframe drag recovery do not actively deploy a recovery device that changes the physical configuration of the model. In the event that dual deployment is used, passive secondary recovery methods such as ballistic recovery do not change the physical configuration of the model. For these reasons, Passive Recovery is not permitted to be used as a valid method of recovery for certification flights in HPR model

(Moved by Cochran, seconded by Rachor - Unanimous)

### Standards and Testing

The Board reviewed Jack Kane's report. The following action items for S&T were established by a Board motion. (Moved by Barber, seconded by Cochran, unanimous):

1. The NAR President will appoint and the Board will approve Co-Chairs for the committee. Any matters in which Co-Chairs cannot agree will be referred to and decided by the NAR President.
2. Appropriate action with the manufacturers will be taken on motors reported via MESS reports received in the 2005-2006 period. These actions will be reported to the NAR President by October 1, 2006.
3. To support business continuity of the Committee's operations, a second testing facility, cross calibrated to the current facilities used by S&T will be established in western US. Once cross calibration is completed, either facility's results will be acceptable for the purposes of engine certification. The second testing facility must be operational not later than January 1, 2007.

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4. Detailed written protocols and procedures for initial certification, periodic (Triennial) recertification, and decertification will be written and delivered to the NAR Board by January 1, 2007.
5. Any motors currently on hand for the Triennial Recertification will have testing completed by NARAM 49. All single use motors currently on hand must have testing completed by the Winter 2007 NAR Board meeting with results reported to manufacturers. This single use testing will include retests of any motor which fail certification testing during the initial tests.
6. A protocol and detailed written procedures for engine certification using a stand other than an NAR test stand will be developed. No further testing at other test stands will be conducted until these protocols and procedures have been reviewed and approved by the NAR President. The procedures and protocols will include provisions to correct test data to standard atmospheric conditions.

Additional follow up actions not subject to the timing and reporting requirements of the motion above were discussed as follows:

1. S&T will test motors to be used by the US Spacemodeling Team at the upcoming World Championships, and provide documentation to be used to show the results of that testing to be submitted at the contest. (NOTE: S&T has previously done such testing of special motors used by the US Team in prior Championships.) . **(DONE)**
2. S&T should write and deliver to the NAR President a two to three sentence blurb exhorting members to continue submitting MESS reports for publication in the Model Rocketeer. . **(DONE)**
3. S&T's future technology needs should be discussed with Jennifer Ash-Poole, Chairman of the Special Committee on Technology.
4. A method to assist in the procedure writing would be to have a "scribe" assigned to the next few firing sessions, with the sole task of this scribe being to write down and document the process of both firing the motors and reducing the data.
5. The Special Committee on Technology will develop and implement an auto-response for MESS report submission; the person filing the MESS report would receive an immediate "thank you" for reporting the failure.
6. A theory regarding E9 catastrophic failures is that the wrong engine plugs may be causing the failures. The Safety Committee will develop a means to test this theory and report the results to S&T.
7. The NAR President will develop and review with appropriate counsel a warranty disclaimer designed to limit the potential legal liabilities of motor testing.
8. The NAR President will investigate the cost of insurance to cover motor certification activities.

The Board accepted with thanks but without action the following reports:

- Section Activities Committee, Rod Schafer
- Special Committee on Technology, Jennifer Ash-Poole
- Publications Committee, Mark B. Bundick
- Contest and Records Committee, Tom Lyon

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- National Events Committee, Trip Barber
- NARTS, Tom Ha
- NARTREK, George Scheil

After the Association Meeting, the Board voted Trip Barber for a 3 year term as Vice President. (Nominated by Ash-Poole, seconded by McNabb– Unanimous)

The executive committee was then appointed by president Mark Bundick. The committee members are Trip Barber, Ted Cochran, and Mark Bundick.

The Board also voted to approve the following slate of Committee Chairman and Trustee Liaisons submitted by the President (Moved by McNabb, seconded by Guzik – Unanimous)

| Committee                                  | Chair                                      | Liaison   |
|--|--|-----------|
| Publications                               | Mark Bundick                               | na        |
| Contest and Records                        | Tom Lyon                                   | Ash-Poole |
| Education                                  | Vince Huegele                              | McNabb    |
| Membership                                 | Todd Schweim                               | Bundick   |
| NARTREK                                    | George Scheil                              | McNabb    |
| National Events                            | Trip Barber                                | na        |
| Safety                                     | Ted Cochran                                | na        |
| Section Activities                         | John Hochheimer                            | Rachor    |
| Special Committee on International Affairs | John Langford                              | Barber    |
| Sport Services                             | Carl Tulanko                               | Cochran   |
| Standards and Testing                      | Jack Kane /<br>John Lyngdal<br>(co-chairs) | na        |
| Technical Services                         | Tom Ha                                     | Bundick   |

A motion to adjourn was passed (Moved by Guzik, seconded and passed by acclamation).