

To: ATF, Firearms and Explosives Branch
Washington, D.C. 20226

5/28/92

From: Guy J. Brunda
13 Pine St. RD#1
Nesquehoning, Pa. 18240
P.H. 717-645-4972, M-F, 10-5 P.M.
R.E. Class 'B', Type 'H', Pyrotechnic
restrictions and compliances.

Dear Sirs,

Enclosed are copies of proof's of identity, several 'H' motor data sheets and a copy of a distributors' motor listing.

I am currently disabled from Crohns' disease which forced termination from AT&T in 1988, as an engineer. Hopefully this situation will improve in the future.

Nature Of Work: Launching small scale rockets, carrying minature electronic payloads helps in the development of such systems under actual conditions.

Securing permission to use a 200 acre diary farm facility in eastern schuylkill county has, during the past (5) five years, given good results as such types of areas are not available. The conditions I require for launch are listed as follows.

- (A) One, (1) hour before sunset, 0-3 MPH winds, both at ground and at altitude.
- (B) Cloudlësssskies, aircraft and vehicle visability required.
- (C) (2) or (3) recovery assistances.
- (D) April 1 to July 1, to insure minimum ground cover, recovery visibility.
- (E) Medical condition restrictions.

Vehicles (Rockets): (2) two are currently used that have minimum weight and good aerodynamics. Both units have alumized mylar parachutes which give excellent tracking and ground recovery.

Listed below are their demensions:

- A. 48" in length, 2.71" in dia., total weight with motor and payload is 32 oz.
- B. 40" in length, 2.34" in dia., total weight with motor and payload is 27 oz.
- C. Both units are carrying a 6 oz. payload.

Payloads:

- A. Microprocessor based controlled barometer/ altimeter for altitude determination, failure-mode analysis and acceleration calculations.
- B. 100 MHZ Transmitter, 150 Milliwatts output power.
- C. High power minature strobe light.
- D. Future payloads will include;
 - 1. Minature camera and or T.V.
 - 2. Optical laser tracking system
 - 3. Optical laser telemetering system.

Note: These systems constitute the main reasons for the development of this activity utilizing state-of-the-art technology. It also contributes to the development of design and test and reliability of small systems from an engineering standpoint.

Motors;

The type 'H', class 'B', I feel are the only way to achieve an altitude greater than 1500 feet, as recorded on prior flights with 'G' type motors. I do require a 4-5,000 foot height to test and verify all the capabilities of my systems. Also noted here is the maxmimum motor diameter of both rockets is 29 MM, which would limit maxmimum motor size to 'H' type only.

ATF need: Prior conversations with Mr. Dan Crowley and Mr. Thomas Stewart of your bureau, indicated that the ATF is the controlling agency of this specilized material namely class 'B' type, ammonium-perchlorite, pyrotechnic, rocket motors.

Mr. Stewart has sent to me a copy of the ATF-P5400-7, Orange-Book for my records. Other associated documents that I have or have on order with the Government Printing Office are listed below:

1. FAR 101 and Subpart "C".
2. 49 CFR, Parts 100-199, D.O.T., (on order.)
3. NFPA 1122
4. 29 CFR, Parts 55, (on order)

If your bureau could help me citing any restrictions or required licensing that I need to purchase and use the above motors, for the activities I have described, it would be a great help at this time.

Both this year and in the future I will need a supplier, within reasonable driving distance, for a small number (less than 10) , of motors for seasonal usage.

If I have not included any needed information about myself, interests or activities, please feel free to contact me at anytime,

Sincerely,

Guy J. Brunda

Prior Launch Summary of 1988-1992 :

MAV#2 (Smaller Rocket)

MAV#3 (Larger Rocket)

G-50-10	G-60 -10
G-40-10	G-25-10
G-125-10	G-100-12,W/Payload.
G-125-15,W/Payload.	G-100-12," " , <u>Photo#4</u>
G-125-15," " .	G-125-15," " .
G-80-10, " " .	G-80-7 , " " , <u>Photo#3</u>
G-125-10," " .	G-80-7, " " .
	G-125-10," " .
Note: 7/12/92 Engine-----G-80-7 , " " .	
Failure	

Since both vehicles (Photo #1) have a maximum 29MM motor diameter it does limit the size of motors* to "H" type. If (1) one mile in height can be achieved, approx. 4-5000 Ft., my payloads and other experimental tests can be performed and exercised fully.

In persuing the usage of class "B" motors' this year I had contacted ATF, D.O.T., and FAA agencies for further instructions regarding Professional research and development using vehicles powered by this type of motor.

All of the Bureaus' responded favorable and placed no restrictions on my activity.

I did however discover much resentment from Dealers and Manufactures of these devices , who , would only honor Model Rocket Club Associations for purchase requirements.

This does leave a gap between the Professionals', current statues and the technical activities they are persuing.

If you could help in this matter it would be greatly appreciated.

Yours Sincerely,

Guy J. Brunda

Betsy Jof2