

11-20-2003

DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademark



or copy thereof.

1. Name of the conveying party(ies):

**Atlantic Research Corporation**

- Individual(s)
- General Partnership
- Corporation-State - Delaware
- Other \_\_\_\_\_
- Association
- Limited Partnership

Additional name(s) of conveying party(ies) attached?  Yes  No

3. Nature of conveyance:

- Assignment
- Security Agreement
- Other \_\_\_\_\_
- Merger
- Change of Name

Execution Date: **October 17, 2003**

102605421

Name: AeroJet-General Corporation

Internal Address: \_\_\_\_\_

Street Address: Highway 50 & Aerojet Road

City: Rancho Cordova State: CA ZIP: 95670

- Individual(s) citizenship \_\_\_\_\_
- Association \_\_\_\_\_
- General Partnership \_\_\_\_\_
- Limited Partnership \_\_\_\_\_
- Corporation-State Ohio
- Other \_\_\_\_\_

If assignee is not domiciled in the United States, a domestic representative designation is attached:  Yes  No

(Designations must be a separate document from assignment)  
Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**see attached Schedule A - Patent Applications  
(17 patent applications)**

B. Patent No.(s) **see attached Schedule A -  
Patents Issued (28 issued patents)**

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Joseph R. Dreitler

Internal Address: Jones Day

Suite 1800

Street Address: 41 South High Street

City: Columbus State: OH ZIP: 43215

6. Total number of applications and patents involved: 45

7. Total fee (37 CFR 3.41)..... \$ 1,800.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number:

50-1432

(Attach duplicate copy of this page if paying by deposit account)

11/19/2003 DBYRNE 00000025 501432 6039819

01 FD-0021 1800.00 DA

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Joseph R. Dreitler  
Name of Person Signing

Signature

October 30, 2003  
Date

Total number of pages including cover sheet, attachments, and document: 6

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

**SCHEDULE A  
TO  
U.S. PATENT ASSIGNMENT**

**PATENTS ISSUED**

<b>Patent Number</b>	<b>Title</b>	<b>Issue Date</b>
6,039,819	Solid propellant containing ferrocenyl phosphine derivatives	03/21/2000
5,111,184	Tamper-proof device for detecting opening and closing of a secure container	05/05/1992
5,122,213	Prestressed article and method	06/16/1992
5,124,196	Prestressed article and method	06/23/1992
5,355,763	Propellant casting apparatus	10/18/1994
5,170,007	Tailorable roll-bonded insensitive munitions case	12/08/1992
5,388,399	Rocket motor having unitary case, insulation and propellant	02/14/1995
5,285,592	Motor case with composite overwrap and method	02/15/1994
5,499,739	Thermoplastic liner for and method of overwrapping high pressure vessels	03/19/1996
5,831,155	Apparatus and method for simulating rocket-to-ramjet transition in a propulsion system	11/03/1998
5,784,877	Rocket-ramjet engine casing port closure	07/28/1998
6,265,330	Non-Asbestos insulation for rocket motor casing	07/27/2001
6,024,810	Castable double base solid rocket propellant containing ballistic modifier pasted in an inert polymer	02/15/2000
5,927,643	Self-deploying airfoil for missile or the like	07/27/1999
6,066,213	Minimum smoke propellant composition	05/23/2000
6,126,763	Minimum smoke propellant composition	10/03/2000
6,142,417	Self-deploying air inlet for an air breathing missile	11/07/2000
6,174,587	Shock attenuation barrier	01/16/2001
6,330,793	Erosion resistant rocket nozzle	12/18/2001
6,266,926	Gas generator deployed occupant protection apparatus and method	07/31/2001
6,200,664	Explosion barrier	07/13/2001
6,349,505	Window protection apparatus	02/26/2002
6,228,192	Double base propellant containing 5-aminotetrazole	6,228,192
6,354,220	Underwater explosive device	03/12/2002
6,405,653	Supercavitating underwater projectile	06/18/2002
6,045,726	Fire suppressant	04/04/2000
6,328,906	Chemical delivery systems for fire suppression	12/11/2001
6,277,296	Fire suppressant compositions	08/21/2001

PATENT APPLICATIONS

<b>Application Number</b>	<b>Title</b>	<b>Filing Date</b>
05/783919	Combustible Compositions For Air Augmented Rocket Engines	03/24/1977
08/811598	Rocket motor case using plank sections and method of manufacture (Secrecy Order)	02/26/1997
09/119561	Rocket motor case using plank sections and method of manufacture (Secrecy Order)	07/21/1998
08/145410	Security Device (Secrecy Order)	11/02/1998
09/076105	Minimum smoke propellant composition (Secrecy Order)	02/12/1998
09/363013	Premixed liquid monopropellant solutions and mixtures	07/29/1999
09/803662	Insensitive Nitrocellulose-based gas generator formulations	03/12/2001
09/908447	Solid propellant formulations having silver nitrate as an oxidizer	07/19/2001
10/402139	Iridium catalyzed hydrogen peroxide based monopropellant system	03/31/2003
10/200597	Controlled autoignition propellant systems	07/23/2002
10/145540	Solid propellant formulations and methods and devices and employing same for the destruction of airborne biological and/or chemical agents	05/15/2002
10/038858	Nozzle throat area control apparatus and method	01/18/2002
10/042391	Apparatus and method for passive venting of rocket motor or ordinance care	01/11/2002
10/120830	Propellant test apparatus	04/12/2002
10/376297	Controlled autoignition propellant	03/03/2003
10/377775	Solid propellant formulations and methods and devices employing same for the destructing of airborne biological and/or chemical agents	03/03/2003
10/377773	Solid propellant formulations and methods and devices employing same for the destructing of airborne biological and/or chemical agents	03/03/2003

**U.S. PATENT ASSIGNMENT**

WHEREAS, **ATLANTIC RESEARCH CORPORATION**, ("Seller"), a Delaware corporation, is the sole and exclusive owner of the patents and patent applications listed on the attached Schedule A, and of the inventions or improvements disclosed therein (all hereinafter collectively referred to as the "Patents");

WHEREAS, **AEROJET-GENERAL CORPORATION**, ("Buyer"), an Ohio corporation, is acquiring the Patents from Seller pursuant to the terms set forth in that certain Purchase Agreement by and between Seller and Buyer dated May 2, 2003 (the "Agreement"); and

WHEREAS, Seller wishes to herein memorialize said assignment, transfer and sale of the Patents to Buyer.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, be it known that for good and valuable consideration set forth in the Agreement, and other valuable and legally sufficient consideration, the receipt and legal sufficiency of which is hereby acknowledged, Seller has sold, assigned and transferred, and by these presents does sell, assign and transfer unto Buyer, all right, title and interest in and to the Patents, and any subsequently filed continuations, continuations-in-part, divisions, reissues, reexaminations, extensions and foreign patents and patent applications thereof, and any rights to file applications and receive patents thereon, the same to be held and enjoyed by Buyer for its own use and enjoyment, and for the use and enjoyment of its successors, assigns or other legal representatives, to the end of the term or terms for which said Patents are or may be granted or reissued, as fully and entirely as the same would have been held and enjoyed by Seller if this assignment and sale had not been made; together with all claims for past and future damages by reason of infringement of same, with the right to sue for past and future damages and collect the same for its own use and enjoyment, and for the use and enjoyment of its successors, assigns or other legal representatives.

AND, Seller hereby requests the United States Commissioner of Patents and Trademarks (the "Commissioner") to record this Patent Assignment. Seller hereby further requests the Commissioner to issue any and all patents resulting from applications among the Patents or derived therefrom to Buyer as assignee of the entire interest.

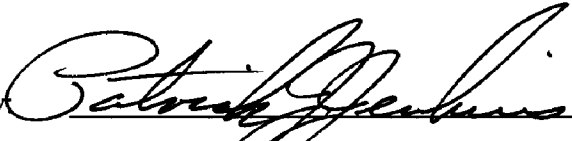
This Patent Assignment shall be binding upon and shall inure to the benefit of the respective successors and assigns of Seller and Buyer. This Patent Assignment shall not confer any rights or remedies upon any person other than the parties hereto, and their respective successors and assigns.

[Signature Page Follows]

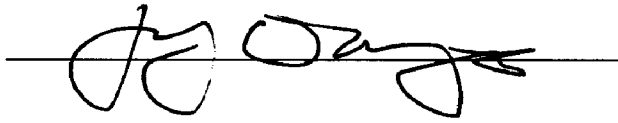


IN TESTIMONY WHEREOF, Seller has caused this Patent Assignment to be executed by its duly authorized representative on October 17, 2003.

**ATLANTIC RESEARCH CORPORATION**

By   
Name: Patrick J. Jenkins  
Title: Vice President and Chief Financial Officer

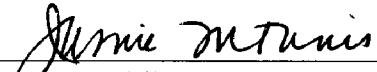
ATTEST:



**CERTIFICATE OF ACKNOWLEDGEMENT**

I, Jamie M. Tanis, a Notary Public in and for District of Columbia do hereby certify that Patrick J. Jenkins, personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument as a free act and deed on behalf of the identified corporation, Atlantic Research Corporation, with authority to do so.

IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this 17 day of October 2003.

  
Notary Public  
Commission Expires: 1-1-2008



Acknowledged and Accepted:

AEROJET-GENERAL CORPORATION

By:



Name: Brian E. Sweeney

Title: Vice President  
Legal & Contracts

Date: October 17, 2003

US Patent Assignment



**PATENT**  
**REEL: 014699 FRAME: 0116**

# JONES DAY

41 SOUTH HIGH STREET • SUITE 1900

COLUMBUS, OHIO 43215-6113

TELEPHONE: 614-469-3939 • FACSIMILE: 614-461-4198

WRITER'S DIRECT NUMBER:

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[jrdreitler@jonesday.com](mailto:jrdreitler@jonesday.com)

JP001404:nf  
COI-1256291v2  
315573-106016

November 13, 2003

## Via U.S. Express Mail

Box Assignments  
Commissioner of Patents  
P.O. Box 1450  
Arlington, Virginia 22313-1450

Re: Patent and PCT Patent Assignments from Atlantic Research Corporation to  
AeroJet-General Corporation

Dear Sir/Madam:

Enclosed are two Recordation Cover Sheets and U.S. Trademark Assignments from Atlantic Research Corporation, a Delaware corporation to Aero-Jet General Corporation, an Ohio corporation with respect to the following patents:

### PATENTS ISSUED

Patent Number	Title	Issue Date
6,039,819	Solid propellant containing ferrocenyl phosphine derivatives	03/21/2000
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