

D100P 9-17/96 *S-2444-EX-96*
VERNER · LIIPFERT
BERNHARD · McPHERSON ³/₈ HAND
CHARTERED

Thomas J. Keller
(202) 371-6060

901 - 15TH STREET, N.W.
WASHINGTON, D.C. 20005-2301
(202) 371-6000
FAX: (202) 371-6279

May 6, 1996

VIA HAND DELIVERY

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
Experimental Radio Services
P.O. Box 358320
Pittsburgh, PA 15251-5320

Re: Northrop Grumman Corporation
(File No. 5253-EX-PL-96)
Emergency Request for Special Temporary Authority

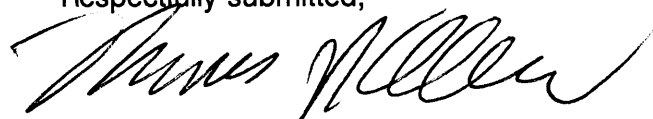
Dear Mr. Secretary:

On behalf of Northrop Grumman Corporation ("Northrop Grumman") there is submitted herewith, in triplicate, an Emergency request for Special Temporary Authority (STA) for operation of an experimental facility located south of White Castle Road, one mile west of US 1 North, St. Augustine, Florida, in accordance with its application for a new station in the Experimental Radio Service filed April 19, 1996. A receipt-stamped copy of the application is enclosed. Northrop Grumman has an urgent need to conduct testing and maintenance of the facilities requested in the attached application in enable the company to comply with a request received from the U.S. Navy on April 9, 1996. Northrop Grumman respectfully requests that the Emergency STA be granted on or before May 15, 1996.

This STA request consists of a certification bearing the original signature of Fred C. Berrong, Principal Technologist of Northrop Grumman. Northrop Grumman will file the requisite Anti-Drug Abuse Act Certification as quickly as possible. Given the urgency of this matter, Northrop Grumman respectfully requests that processing of the emergency STA commence prior to receipt of the certification.

Also enclosed are the FCC Form 159 and a check made payable to the "Federal Communications Commission," in the amount of \$45.00 to cover the requisite filing fee.

Respectfully submitted,



Thomas J. Keller
Counsel to Northrop Grumman Corporation

Enclosures

**NORTHROP GRUMMAN CORPORATION
ONE NORTHROP AVENUE (MS 0820/N5-1)
HAWTHORNE, CA 90250**

May 3, 1996

**Federal Communications Commission
Experimental Radio Services
P.O. Box 358320
Pittsburgh, PA 15251-5315**

Dear Mr. Secretary:

I, Fred C. Berrong, Principal Technologist of Northrop Grumman Corporation, ("Northrop Grumman"), hereby certify that I am an authorized employee of Northrop Grumman and that I request a 180-day grant of Special Temporary Authority for Northrop Grumman to operate an experimental facility located south of White Castle Road, one mile west of US 1 North.

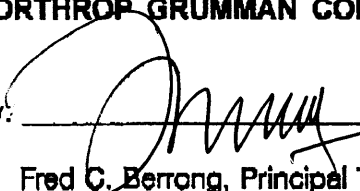
On April 9, 1996 Northrop Grumman received a request from the U.S. Navy, one of its important customers, to conduct testing and maintenance of E-2C Rotodomes, as part of the ongoing development and production of the Navy's E-2C Airborne Early Warning /Control Weapons System. The testing and maintenance, which are scheduled to begin on May 15, 1996, are crucial to proper deployment of the equipment under contract numbers N00019-90-C-0002 and N00019-95-C-0051.

On April 19, 1996, Northrop Grumman filed an FCC Form 442 application for a new radio station authorization in the Experimental Radio Service. A receipt-stamped copy is attached as proof-of-filing. Northrop Grumman respectfully requests STA to operate the facilities requested, while the staff processes the Form 442 application.

Grant of STA will enable Northrop Grumman to conduct overall quality tests on two antennas during daylight hours. Northrop Grumman will manufacture the experimental equipment. The output power from the signal generator is 6.0 watts and the overall height of the antenna structure above ground is 18 meters. The purpose of the antenna quality tests is to conduct pre-flight evaluations of certain operating parameters of the equipment, such as beamwidth and squint angle, which cannot be properly tested while the equipment is in an airborne configuration.

Very truly yours,

NORTHROP GRUMMAN CORPORATION

By: 

Fred C. Berrong, Principal Technologist

ECC/MELLON APR 19 1996

FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB

3060-0589

Expires 2/28/97

FCC REMITTANCE ADVICEPAGE NO. 1 OF **SPECIAL USE****FOG USE ONLY**

(RESERVED)

(Read instructions carefully BEFORE proceeding.)

PAYOR INFORMATION

(1) FCC ACCOUNT NUMBER

Did you have a number prior to this? Enter it.

(2) TOTAL AMOUNT PAID (dollars and cents)

0 5 2 1 2 3 9 1 6 2

\$ 45.00

(3) PAYOR NAME (If paying by credit card, enter name exactly as it appears on your card)

Verner, Liipfert, Bernhard, McPherson and Hand, Chtd.

(4) STREET ADDRESS LINE NO. 1

901 15th Street, N.W., Suite 700

(5) STREET ADDRESS LINE NO. 2

Attn: Thomas J. Keller

(6) CITY

Washington

(7) STATE

DC

(8) ZIP CODE

20005-2301

(9) DAYTIME TELEPHONE NUMBER (Include area code)

202-371-6060

(10) COUNTRY CODE (if not U.S.A.)

ITEM #1 INFORMATION

(11A) NAME OF APPLICANT, LICENSEE, REGULATEE, OR DEBTOR

Northrop Grumman Corporation

(12A) FCC CALL SIGN/OTHER ID

(13A) ZIP CODE

90067

(14A) PAYMENT TYPE CODE

E A E

(15A) QUANTITY

1

(16A) FEE DUE FOR
PAYMENT TYPE CODE
IN BLOCK 14
\$ 45.00

(17A) FCC CODE 1

(18A) FCC CODE 2

(19A) ADDRESS LINE NO. 1

1840 Century Park East

(20A) ADDRESS LINE NO. 2

Attn: James C. Johnson

(21A) CITY/STATE OR COUNTRY CODE

Los Angeles, CA

ITEM #2 INFORMATION

(11B) NAME OF APPLICANT, LICENSEE, REGULATEE, OR DEBTOR

(12B) FCC CALL SIGN/OTHER ID

(13B) ZIP CODE

(14B) PAYMENT TYPE CODE

(15B) QUANTITY

(16B) FEE DUE FOR
PAYMENT TYPE CODE
IN BLOCK 14
\$

(17B) FCC CODE 1

(18B) FCC CODE 2

(19B) ADDRESS LINE NO. 1

(20B) ADDRESS LINE NO. 2

(21B) CITY/STATE OR COUNTRY CODE

CREDIT CARD PAYMENT INFORMATION

(22) MASTERCARD/VISA ACCOUNT NUMBER:

☐ Mastercard

EXPIRATION DATE:

☐ Visa

Month

Year

AUTHORIZED SIGNATURE

DATE

(23) I hereby authorize the FCC to charge my VISA or Mastercard
for the service(s)/authorization(s) herein describe.

FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

 APPROVED BY OMB
 3060-0065
 Expires 12/31/96

**APPLICATION FOR NEW OR MODIFIED RADIO STATION AUTHORIZATION UNDER PART 5
 OF FCC RULES - EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)**

1 Applicant's Name and Post Office address (Street address, city, state, and ZIP Code. See instruction No. 4) Northrop Grumman Corporation 1 Northrop Avenue Hawthorne, CA 90250 Attn: Fred Berrong 0820/N5-1	File No. 5253 PL86
---	---

2(a) Application for (check only one box) ☒ New station ☐ Modification of existing authorization	2(b) For Modification indicate below: File No: _____ Call Sign: _____
---	---

3 Application for modification indicate whether change is an addition or replacement of (check all that apply).

☐ FREQUENCY ☐ EMISSION ☐ POWER ☐ LOCATION
☐ OTHER PARTICULARS (describe below or in attached EXHIBIT No. _____)

4 Particulars of Operation (see instruction below)

Frequency bands whether 100 or 1000	POWER			EMISSION	MODULATING SIGNAL	NECESSARY BANDWIDTH (KHz)
	(a)	(b)	(c)			
409.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
420.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
434.38MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
446.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
448.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
450.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
1030.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
1055.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
1060.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz
1090.0MHz	6.0W	6000.0W	Mean	CW	none	5.0KHz

- (A) List each frequency or frequency band separately. (If more space is required, attach as EXHIBIT No. 1)
- (B) Insert maximum RF output power at the transmitter terminals. Specify units.
- (C) Insert maximum effective radiated power from the antenna (If pulsed emission, specify peak power).
- (D) Insert "MEAN" or "PEAK" (See definitions in Part 5).
- (E) List each type of emission separately for each frequency. (See Section 2901 of FCC Rules)
- (F) Insert as appropriate for the type of modulation:
- (1) the maximum speed of keying in bands;
 - (2) maximum audio modulating frequency;
 - (3) frequency deviation of carrier;
 - (4) pulse duration and repetition rate.
- For complex emissions, describe in detail in the space provided below.
- (G) Describe how the necessary bandwidth was determined in space provided below.

5(a). Proposed location of transmitter and transmitting antenna (check only one box)

☒ FIXED/BASE

☐ MOBILE

☐ BASE AND MOBILE

5(b). If permanently located at a fixed location, give below:

State FL County St. Johns City or Town St. Augustine

Number and street (or other indication of location)
South of White Castle Road;
1 mile west of US 1 North

5(d). If mobile, describe the exact area of operation

5(c). Enter geographical coordinates exact to the nearest second

North Latitude

81° 23' 12"

West Longitude

30° 00' 04"

5(e). Enter geographical coordinates of the approximate center of proposed area of operation (mobile applications)

North Latitude

.

West Longitude

.

6. Is a directional antenna (other than radar) used?

If "YES", give the following information:

☒ YES

☐ NO

(a) Width of beam in degrees at the half-power point 6.0

(b) Orientation in horizontal plane 000 (c) Orientation in vertical plane 90

7. Is this authorization to be used for fulfilling the requirement of a government contract with an agency of the United States Government?

☒ YES

☐ NO

If "YES", attach as EXHIBIT No. 2 a narrative statement describing the government project, agency and contact number.

8. Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government?

☐ YES

☒ NO

If "YES", attach as EXHIBIT No. _____ the following information: Provide the contract number and the name of the foreign government concerned.

9. Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)

☒ YES

☐ NO

If "YES", attach as EXHIBIT No. 3 a narrative statement providing the following information:

- (a) A description of the nature of the research project being conducted.
(b) A showing that the communications facilities requested are necessary for the research project involved.
(c) A showing that existing communications facilities are inadequate.

10. If all the answers to items 7, 8, and 9 are "NO", attach as EXHIBIT No. _____ a narrative statement describing in detail the following:

- (a) The complete program of research and experimentation proposed including description of equipment and theory of operation.
(b) The specific objectives sought to be accomplished.
(c) How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion, or utilization of the radio art or is along line not already investigated.

11(a). Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application. 10 years.

(b) If less than 2 years give the length of time in months that the authorization requested in this application will be required.

12. Would a Commission grant of this application come within Section 11807 of the FCC Rules such that it may have significant environmental impact?

☐ YES

☒ NO

If you answer "YES", submit an Environmental Assessment required by Section 11801.

13. List below transmitting equipment to be installed (if experimental so state):

MANUFACTURER

TYPE

NO. OF UNIT

Northrop Grumman Corporation

Experimental

2

14. Is the equipment listed in Item 13 capable of station identification pursuant to Section 5.822? ☐ YES ☒ NO
15. Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? ☒ YES ☐ NO
- If "YES", give the following (see instruction 2):
- (a) Overall height above ground to tip of antenna is 17.5 meters
- (b) Elevation of ground at antenna site above mean sea level is 11.27 meters
- (c) Distance to nearest aircraft landing area is 6.3 kilometers
- (d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.

none

- (e) Submit as EXHIBIT No. 4 a vertical profile sketch of total structure including supporting building if any, giving heights in meters above ground for all significant features. Clearly indicate existing portion, noting particulars of aviation obstruction lighting already available.

16. Applicant is (check only one box)

☐ INDIVIDUAL ☐ ASSOCIATION ☐ PARTNERSHIP ☒ CORPORATION

☐ OTHER (describe below)

17. Is applicant a foreign government or a representative of a foreign government? ☐ YES ☒ NO

18. Has applicant or any party to this application had any FCC station license or permit revoked or had any application for permit license or renewal denied by this Commission? ☐ YES ☒ NO
- If "YES", attach as EXHIBIT No. _____ a statement giving call sign of license or permit revoked and relate circumstances.

19. Will applicant be owner and operator of the station? ☒ YES ☐ NO

20. Give name, title, and telephone number (include area code) of person who can best handle inquiries pertaining to this application.
- Fred Berrong (213) 600-4974

21. APPLICANT ANTI-DRUG ABUSE CERTIFICATION:

By checking "YES", the applicant certifies that in the case of an individual applicant, he or she is not subject to denial of federal benefits that includes FCC benefits pursuant to Section 5501 of the Anti-Drug Abuse Act of 1988 21 U.S.C. 882 or, in the case of a non-individual applicant (e.g. corporation, partnership, or other unincorporated association), no party to the applicant is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of "party" for these purposes, see 47 CFR 1.2002(h).

☒ YES ☐ NO

22. List below all exhibits in numerical sequence and the item number of form requiring the exhibit identified.

EXHIBIT NUMBER	ITEM NO. OF FORM	EXHIBIT NUMBER	ITEM NO. OF FORM	EXHIBIT NUMBER	ITEM NO. OF FORM
1	4 (A)				
2	7				
3	9				
4	15 (a)				

28. CERTIFICATION:

Attention: Read this certification carefully before signing this application.

THE APPLICANT CERTIFIES THAT:

- (a) Copies of FCC Rule Parts 2 and 5 are on hand; and
- (b) Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- (c) All operations will be on an experimental basis in accordance with Part 5 and other applicable rules and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- (d) Grant of the authorization requested herein will not be construed as a finding on the part of the Commission that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
 - (1) that the applicant will be authorized to operate on any basis other than experimental, and
 - (2) that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

APPLICANT CERTIFIES FURTHER THAT:

- (e) All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- (f) The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- (g) The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum against the regulatory power of the USA.

Signed and dated this 18th day of August, 19 96

Name of Applicant Northrop Grumman

(must correspond with name given on page 1)

By James C. Johnson

(print)

(signature)

Title Vice President and Corporate Secretary

Check appropriate classification:

- ☐ Individual applicant ☐ Member of applicant partnership
- ☐ Authorized employee ☒ Office of applicant corporation or association

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18 Section 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

**NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974
AND THE PAPERWORK REDUCTION ACT OF 1980**

Information requested through this form is authorized by the Communications Act of 1934, as amended, and specified by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulations and responsibilities rendered the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to 47 CFR 0.489 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(5) AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-341, DECEMBER 11, 1980, 44 U.S.C. 3507.

Exhibit 1, Item 4(A) Continuation

Frequency		Power		Emmission		Modulating	Necessary
(A)	(B)	(C)	(D)	(E)	(F)	Signal	Bandwidth (KHz)
						(F)	(G)
1095MHz	6.0W	6000.0W	Mean	CW		None	5.0KHz
1103MHz	6.0W	6000.0W	Mean	CW		None	5.0KHz
1110MHz	6.0W	6000.0W	Mean	CW		None	5.0KHz

Exhibit 2, Item 7

The use of the equipment to be covered by this license is part of the ongoing development and production of the U.S. Navy E-2C Airborne Early Warning/Control Weapons System. This particular equipment is an integral part of the overall system, and is used as one of the many inputs to the total system.

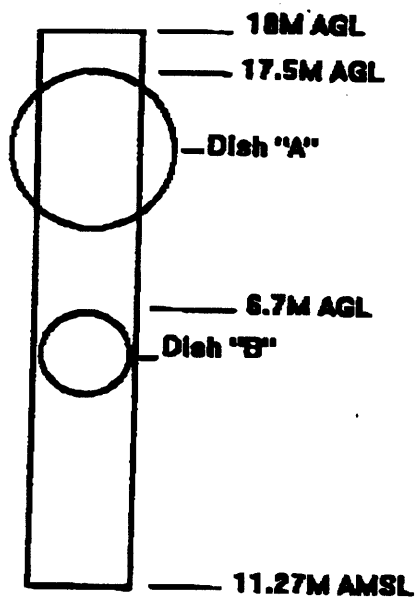
This system is, and will continue to be, an important part of our national defense effort. Current funding is under contract numbers:

N00019-90-C-0002

N00019-95-C-0051

Exhibit 3, Item 9

- a. The use of the equipment and emissions that are to be covered by this license are part of the ongoing development and production of the U. S. Navy E-2C Airborne Early Warning/Control Weapons System.**
- b. Due to the particular application, the results of the experiments utilizing this equipment are in terms of systems operation and do not reflect on this particular equipment as such.**
- c. Current communications facilities for this purpose do not exist.**

EXHIBIT 4, LINE 15(e)

Dish "A": 7.5M, 30dbi ● 400MHz

Dish "B": 3.0M, 30dbi ● 1.05 GHz

96 MAY -8 PM 2:48

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TELECOPIER COVER PAGE

VLDC01-96884.1

VERNER · LIIPFERT
BERNHARD · McPHERSON & HAND
CHARTERED

901 - 15TH STREET, N.W.
WASHINGTON, D.C. 20005-2301
(202) 371-6000
FAX: (202) 371-6279

May 8, 1996

Thomas J. Keller
(202) 371-8060

S-2 444-EX-26

VIA FACSIMILE

Mr. Carl Hule
Federal Communications Commission
Office of Engineering and Technology
Experimental Licensing Branch
2000 M Street, N.W.
Suite 230
Washington, DC 20554

Re: Northrop Grumman Corporation
Emergency Request for Special Temporary Authority

Dear Mr. Hule:

On May 6, 1996, Northrop Grumman Corporation filed an Emergency Request for Special Temporary Authority ("STA") for operation of a new experimental facility in accordance with its pending FCC Form 442 application filed April 19, 1996 (File No. 5253-EX-PL-96). A receipt-stamped copy of the Emergency Request for STA, which included a copy of the April 19 application, is attached as proof-of-filing. Grant of the Emergency STA is necessary to allow Northrop Grumman Corporation to conduct testing and maintenance of E-2C Rotodomes in connection with a U.S. Navy contract; the Navy has requested that the operations commence on May 15, 1996.

Since these quality tests are crucial to the proper deployment of the Navy's E-2C Early Warning/Control Weapons System, Northrop Grumman respectfully requests that processing begin prior to the Branch's receipt of the original Emergency Request for STA, so that the STA may be granted on or before May 15, 1996.

Based on a telephone conversation yesterday between Nancy Hey, Communications Clerk of the Experimental Licensing Branch, and Susan Clark, a Legal Assistant with this office, we understand that submission of this request via facsimile is acceptable.

We sincerely appreciate your attention to this request. Please call me if you have questions.

Sincerely,



Thomas J. Keller
Attorney for Northrop Grumman Corporation

Enclosure