DEPARTMENT OF THE NAVY
NAVAL AIR STATION
PATUXENT RIVER, MARYLAND 20670-5409

NASPAXRIVINST 5100.30E CH-1
815/I-3

JUL 10 1996

NAS PAXRIV INSTRUCTION 5100.30E CHANGE TRANSMITTAL ONE.

From: Commanding Officer

Subj: HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO) EMISSION CONTROL (EMCON) BILL

1. Purpose. To issue change one to this instruction.

2. Action. Make the following pen and ink changes throughout the entire instruction:

a. Replace "Naval Aircraft Vertical EMP Simulator (NAVES)" with "Vertical Polarized Dipole (VPD)" and "TES" with "Horizontal Polarized Dipole (HPD)".

b. Replace phone extensions "3868/4154" with "4679/5101".

E.L. STANDRIDGE

Distribution:
Distribution List II
COMNAVSURFWARCEN (Code F52)
Dahlgren, VA 22448-5100

DEPARTMENT OF THE NAVY
NAVAL AIR STATION
PATUXENT RIVER, MARYLAND 20670-5409

NASPAXRIVINST 5100.30E
8.1.5/I-3

SEP 28 1995

NAS PAXRIV INSTRUCTION 5100.30E

From: Commanding Officer

Subj: HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO) EMISSION CONTROL (EMCON) BILL

Ref: (a) NAVSEA OP 3565/NAVAIR 16-1-529/NAVELEX 0967-LP-624-6010, Vol. II, Part One, 6th Revision
(b) COMNAVORDCEN ltr 8020 OPR N7132 Ser N71/0104 of 08 Mar 95
(c) NASPAXRIVINST 3710.5 series
(d) NASPAXRIVINST 2070.2 series
(e) NATCINST 2400.1 series
(f) NATCINST 5100.7 series
(g) SY82A memo 3960 of 1 Mar 88

Encl: (1) Guide for all HERO EMCON Conditions
(2) HERO Zones
(3) Applications for Hero
(4) HERO EMCON Condition One Procedures
(5) HERO EMCON Condition Two Procedures
(6) HERO EMCON Condition Three Procedures
(7) HERO EMCON Condition Four Procedures
(8) HERO EMCON Condition Five Procedures
(9) HERO EMCON Condition Six Procedures
(10) HERO EMCON Condition Seven Procedures
(11) HERO EMCON Condition Eight Procedures
(12) HERO Zones Map

1. Purpose. To establish operating procedures for setting Hero EMCON Conditions at NAS Patuxent River, MD.

2. Cancellation. NASPAXRIV Instruction 5100.30D.

3. Discussion.

a. As described in reference (a), electromagnetic radiation creates hazards to ordnance systems containing sensitive electro-explosive devices (EED). Exposure to even small levels of radiation can result in degradation of these devices, premature device activation, propellant ignition, and/or warhead detonation. This instruction provides positive control procedures when a HERO EMCON condition exists. Reference (b) contains the results of a HERO survey of the Naval Air Station (NAS), Patuxent River, Maryland, conducted 07 through 11 November 1994. Reference (c) designates areas for loading, offloading, and dearming ordnance.

b. Guidance

(1) Enclosures (1) through (11) list specific zones, HERO conditions, equipment affected, responsibilities, and action to be taken when a HERO EMCON condition is set. Enclosure (12) is a base map illustrating the EMCON zones.

(2) Reference (a) specifies the general HERO requirements to be used when handling any ordnance, regardless of the HERO classification (HERO safe, susceptible, or unsafe).

4. Responsibilities

a. The NAS Ground Electronics Maintenance (GEM) Officer is designated the HERO Control Officer and is responsible for dissemination of HERO information and evaluation of new, reconfigured, or relocated transmitters prior to operation. The GEM Officer is also responsible for informing radio operators of fixed or mobile amateur and citizen band stations of the existence and provisions of this instruction per reference (d).

b. All activities aboard NAS shall coordinate with the Mid-Atlantic Area Frequency Coordinator (Mid-Lant AFC) on frequency assignments and emitter installations per reference (e).

c. Mid-Lant AFC shall advise the HERO Control Officer of all proposed emitter installations.

d. All activities handling HERO unsafe and susceptible ordnance are responsible for notifying the station Weapons Officer (ext. 3350 or 3795) when a requirement to set a HERO EMCON condition exists. This includes local loading operations and aircraft landing with HERO unsafe hung ordnance. All ordnance handling requiring the setting of a HERO EMCON condition shall be coordinated in advance to allow sufficient time for the appropriate HERO EMCON condition to be set.

e. Reference (f) assigns responsibilities for safe operation of Electromagnetic Pulse (EMP) simulators at the Naval Air Warfare Center Aircraft Division (NAWCAD). Reference (g) delineates coordination procedures when the Naval ~~Aircraft Vertical EMP~~ Vertical Polarized Dipole ~~Simulator (NAVES)~~ is pulsed. HERO condition VPD is set during periods of VPD operation for direct coordination between handlers of HERO unsafe and susceptible ordnance and NAVES VPD operators at extension ~~3868~~ 4679 or ~~4154~~. 5101

f. All activity duty officers affected by this instruction

shall notify their maintenance personnel and ordnance handlers, as appropriate, when a HERO EMCON condition is in effect.

g. Reference (b) lists equipment tested and found to present a hazard or possible hazard to ordnance. A copy of reference (b) is on file at the Ground Electronics Maintenance Division of Air Operations Department, Building 426. The installation, relocation, or modification of any RF transmitting equipment requires that a HERO evaluation be conducted. It is the responsibility of the activity controlling the equipment to obtain a HERO evaluation by the HERO Control Officer prior to further operation.

5. Action

a. The Air Operations Duty Officer (AODO) Office is designated the HERO EMCON Control Center. A status board showing the current HERO EMCON condition and a checklist of reports will be maintained by the AODO. Any violations of the HERO EMCON condition are to be reported to the AODO.

b. The station Weapons Officer will keep the AODO and Air Traffic Control Facility Officer (ATCFO) advised of all ordnance activity that requires setting a HERO EMCON condition.

c. When the station Weapons Officer advises the AODO of a need to set a HERO EMCON condition, the AODO will notify all affected units as follows: "Set HERO EMCON Condition (number) from (time) to (time) hours for (purpose)." The AODO will revise the HERO EMCON condition as directed by the station Weapons Officer. The Patuxent ATCFO shall notify aircraft operating at the field that "HERO EMCON Condition (number) is in effect from (time) to (time) hours."

d. Once a HERO EMCON condition has been set, operations must start within 30 minutes of the scheduled time or the condition will be canceled. Any activity not able to comply within 30 minutes shall notify the AODO immediately. The HERO EMCON condition will become effective 30 minutes after initial notification by the AODO to allow for reaction time by affected activities.

e. Any situation that results in HERO unsafe ordnance must be coordinated and controlled immediately. When the AODO is notified that an immediate need exists to set a HERO EMCON condition, the AODO will notify all affected units as follows: "Set Emergency HERO EMCON Condition (number) immediately. Advise when affected

equipment has been secured." The ATCFO will notify aircraft operating at the field that: "Emergency HERO EMCON Condition (number) is in effect."

f. Once it is confirmed that all affected equipment has been secured, the AODO shall notify the Weapons Officer that the HERO unsafe ordnance may be handled and rendered HERO safe.

g. When the need for a HERO EMCON condition no longer exists, the ATCFO shall notify aircraft operating at the field to "Secure from HERO EMCON Condition (number) at (time) hours."

h. The AODO shall notify all affected units as follows: "Secure from HERO EMCON Condition (number) at (time) hours."

6. Review Authority. The Air Operations Officer and the station Weapons Officer shall jointly review this instruction annually and make changes as necessary.

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GUIDE FOR ALL HERO EMCON CONDITIONS

1. When approaching a security and ordnance vehicle with flashing red lights, all vehicles shall pull to the side of the road and stop. Operators of vehicles equipped with transmitters shall not transmit while the ordnance is within 250 feet. When following an explosive convoy, passing the convoy is not authorized.

2. Aircraft commanders and maintenance personnel shall prohibit all HF (2-32 MHZ) or radar transmissions when any HERO EMCON condition exists or when approaching or being approached by a security and ordnance vehicle. All UHF/VHF transmissions will cease when vehicles are within 125 feet of the aircraft.

3. Application of electrical power, connecting an aircraft to a power source, and all radio/radar transmissions are prohibited while susceptible ordnance is being loaded or unloaded.

4. Per reference (c), no radar or HF transmissions are permitted within 400 feet of designated ordnance handling areas.

5. The aircraft being loaded, the ordnance truck escort vehicle, and the fire truck standing by during loading, must observe strict radio silence when within 150 feet of HERO susceptible ordnance, unless vehicle transmitters have been placarded for safe operation up to a designated distance.

6. Ordnance accident response units maintain a minimum separation distance of 150 feet from the accident site when 3 or more VHF/UHF mobile radios are in use, and 50 feet when 3 or more portable radios are in use. For single radio use, observe the placarded distance.

HERO ZONES

Enclosure (12) illustrates the HERO zones at NAS Patuxent River. These HERO zones are outlined as follows:

Zone 1 - Test Pilot School (Hangar 110), Rotary Wing (Hangar 111), Force Warfare (Hangar 306), VX-1 (Hangar 305), NRL (Hangar 109, VQ-4 Alert Detachment (Building 2199), segments of Taxiway "A", Skeet Range, and ordnance transportation routes.

Zone 2 - Truck inspection area, Strike (Hangar 201), ordnance transportation routes.

Zone 3 - ~~TES~~ HPD, ~~NAVES~~ VPD, and ordnance transportation routes.

Zone 4 - Weapons magazine area and the ordnance transportation route.

Zone 5 - NAS Patuxent River airfield, arm/dearm areas, ordnance load/download area, suspect cargo area, parking aprons, and ordnance transportation routes.

Zone 6 - AUW compound.

APPLICATIONS FOR HERO

Ordnance	Situation/ Activity	Location	Hero Condition
All HERO SAFE ORDNANCE	Authorized procedures	All Zones	0
All HERO UNSAFE ORDNANCE	Exposure	Zone 1	1
		Zone 2	2
		Zone 3	3
		Zone 4	4
		Zone 5	5
		Zone 6	6
	Storage	All Zones	0
All HERO SUSCEPTIBLE ORDNANCE	Presence, handling and loading	Zone 1	8
		Zone 2	8
		Zone 3	7
		Zone 4	8
		Zone 5	7
		Zone 6	7
	Storage	All Zones	0

HERO EMCON PROCEDURES

Condition 1

This emergency condition applies to HERO UNSAFE ORDNANCE or ordnance rendered HERO UNSAFE in Zone 1.

Equipment	Phone	Maximum Power
1. EMP pulsers	4671/5101	
NAVES	~~3868/4154~~	Silence
2. Communications transmitters		
FW VAW Bldg 2044 (HF)	737-3808	Silence
RW HNG 111 (HF)	1325/1354	Silence
ASCET Bldg 1652 (HF)	3665	Dummy load only
MARS Bldg 1216 (HF)	4859	Silence
GEM Bldg 105 (HF)	3996	Silence
VX-1, NRL, FW, RW Duty (all HF)	Destructive WX circuit	Silence

3. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances.)

4. Silence all aircraft HF transmitters and maintain the separation distances listed in reference (a) for all other aircraft transmitters.

HERO EMCON PROCEDURES

Condition 2

This emergency condition applies to HERO UNSAFE ORDNANCE or ordnance rendered HERO UNSAFE in Zone 2.

Equipment	Phone	Maximum Power
1. EMP pulsers	4679/5101	
~~NAVES~~ & HF Transmit VPD	~~3868/4154~~	Silence
2. Communications transmitters		
HERO ground plane (HF)	4581	Silence
MARS Bldg 1216 (HF)	4589	100W

3. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

4. Silence all aircraft HF transmitters and maintain the separation distances listed in reference (a) for aircraft transmitters.

HERO EMCON PROCEDURES

Condition 3

This emergency condition applies to HERO UNSAFE ORDNANCE or ordnance rendered HERO UNSAFE in Zone 3.

Equipment	Phone	Maximum Power
1. EMP pulsers	4679/5101	
~~NAVES~~ & ~~TES~~ VPD HPD	~~3868/4154~~	Silence
2. Communications transmitters		
RD Bldg 1630 (HF)	1181	Silence
SY Bldg 1703 (HF)	3166	Silence

3. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

4. Maintain the separation distances listed in reference (a) for aircraft transmitters.

HERO EMCON PROCEDURES

Condition 4

This emergency condition applies to HERO UNSAFE ORDNANCE or ordnance rendered HERO UNSAFE in Zone 4.

Equipment	Phone	Maximum Power
1. EMP pulsers	4679/5101	
~~NAVES~~ VPA	~~3868/4154~~	Silence

2. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

3. Maintain the separation distances listed in reference (a) for aircraft transmitters.

HERO EMCON PROCEDURES

Condition 5

This emergency condition applies to HERO UNSAFE ORDNANCE or ordnance rendered HERO UNSAFE in Zone 5.

Equipment	Phone	Maximum Power
1 EMP pulsers	4679/5101	
VPD ~~NAVES~~ &	~~3868/4154~~	Silence
HF Transmit		Silence
2. Communications transmitters		
MARS Bldg 1216 (HF)	4859	100W
HERO ground plane (HF)	4581	Silence

3. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

4. Silence all aircraft HF transmitters and maintain the separation distances listed in reference (a) for all other aircraft transmitters.

HERO EMCON PROCEDURES

Condition 6

This emergency condition applies to HERO UNSAFE ORDNANCE or ordnance rendered HERO UNSAFE in Zone 6.

Equipment	Phone	Maximum Power
1. EMP pulsers NAVES & TES VPD HPD	4679/5101 ~~3868/4154~~	Silence

2. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

3. Maintain the separation distances listed in reference (a) for aircraft transmitters.

HERO EMCON PROCEDURES

Condition 7

This condition applies to HERO SUSCEPTIBLE ORDNANCE handling and transportation conducted in Zones 3, 5 and 6.

Equipment	Phone	Maximum Power
1. EMP pulsers ~~NAVES~~ VPD	4679/5101 ~~3868/4154~~	Silence

2. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

3. Maintain the separation distances listed in reference (a) for aircraft emitters.

HERO EMCON PROCEDURES

Condition 8

This condition applies to HERO SUSCEPTIBLE ORDNANCE handling and transportation conducted in Zones 1, 2 and 4.

1. Maintain posted separation distances for all mobile and portable transmitters. (See reference (b) for HERO UNSAFE distances).

2. Maintain the separation distances listed in reference (a) for aircraft emitters.

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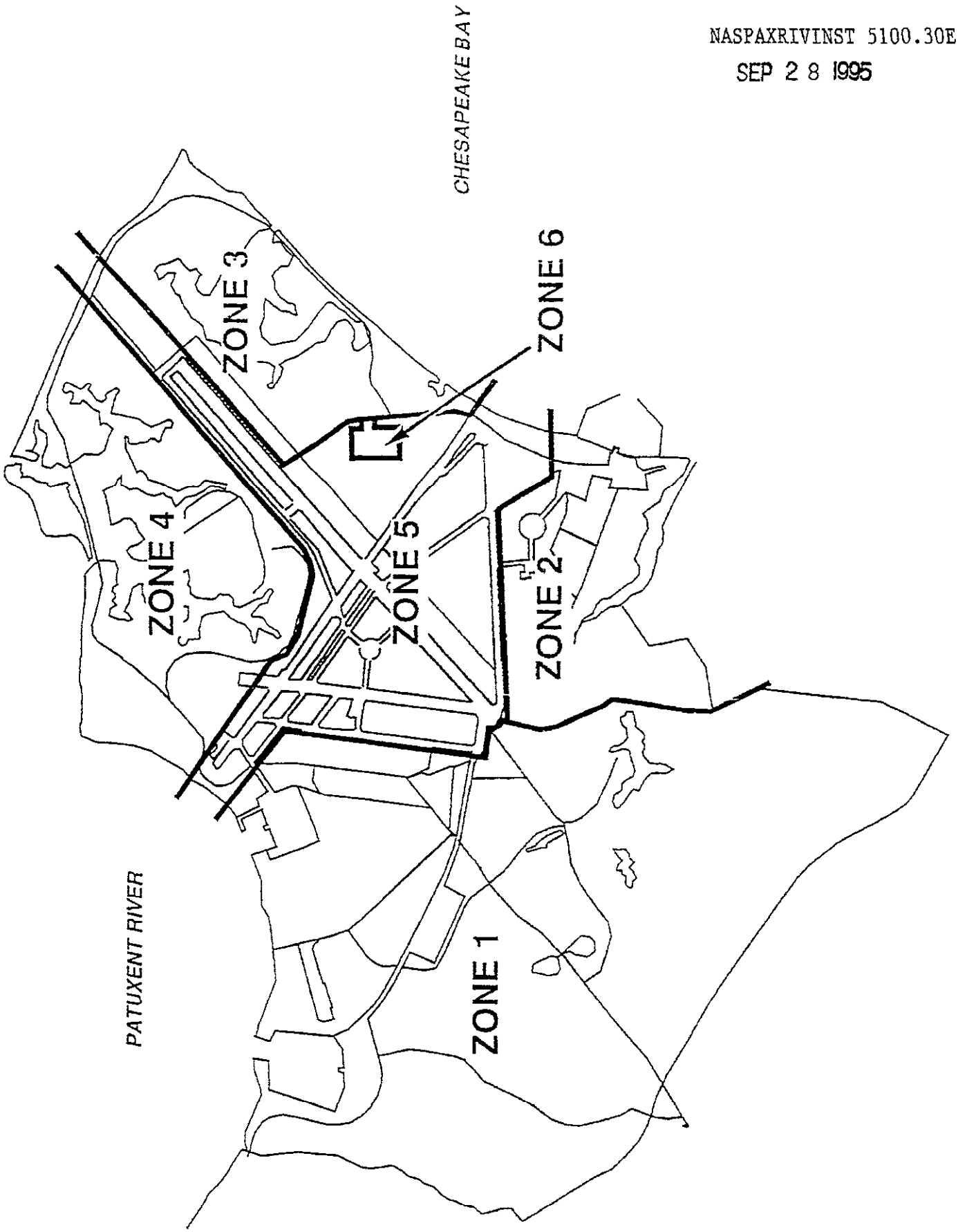

Encl (12)