

MODEL PH-25 SHOP SPACE HEATER SAFETY INSTRUCTIONS

1. A COPY OF THESE INSTRUCTIONS WILL BE POSTED IN THE IMMEDIATE VICINITY OF THE MODEL PH-25 SHOP SPACE HEATER.

2. Strict adherence to this safety checklist is necessary to ensure that adequate safety precautions are taken and effective heater operation is achieved.

a. The Model PH-25 heater will be mounted on an immovable noncombustible base. If installed indoors, the heater must be elevated a minimum of 36 inches.

b. Prior to installation, actual location of heater must be approved by the Base Fire Inspector; phone 3004. Upon approval, a certificate will be posted adjacent to the heater, confirming this approval.

c. Each heater will be inspected prior to the cold season, to determine operating condition and safety factors. Additionally, heaters must be inspected at frequent intervals during the period used.

d. Do not attempt to fill the gasoline reservoir while heater is in operation.

e. Do not refuel warm/hot heater after fire is out; allow heater to cool prior to refueling and attempting to relight.

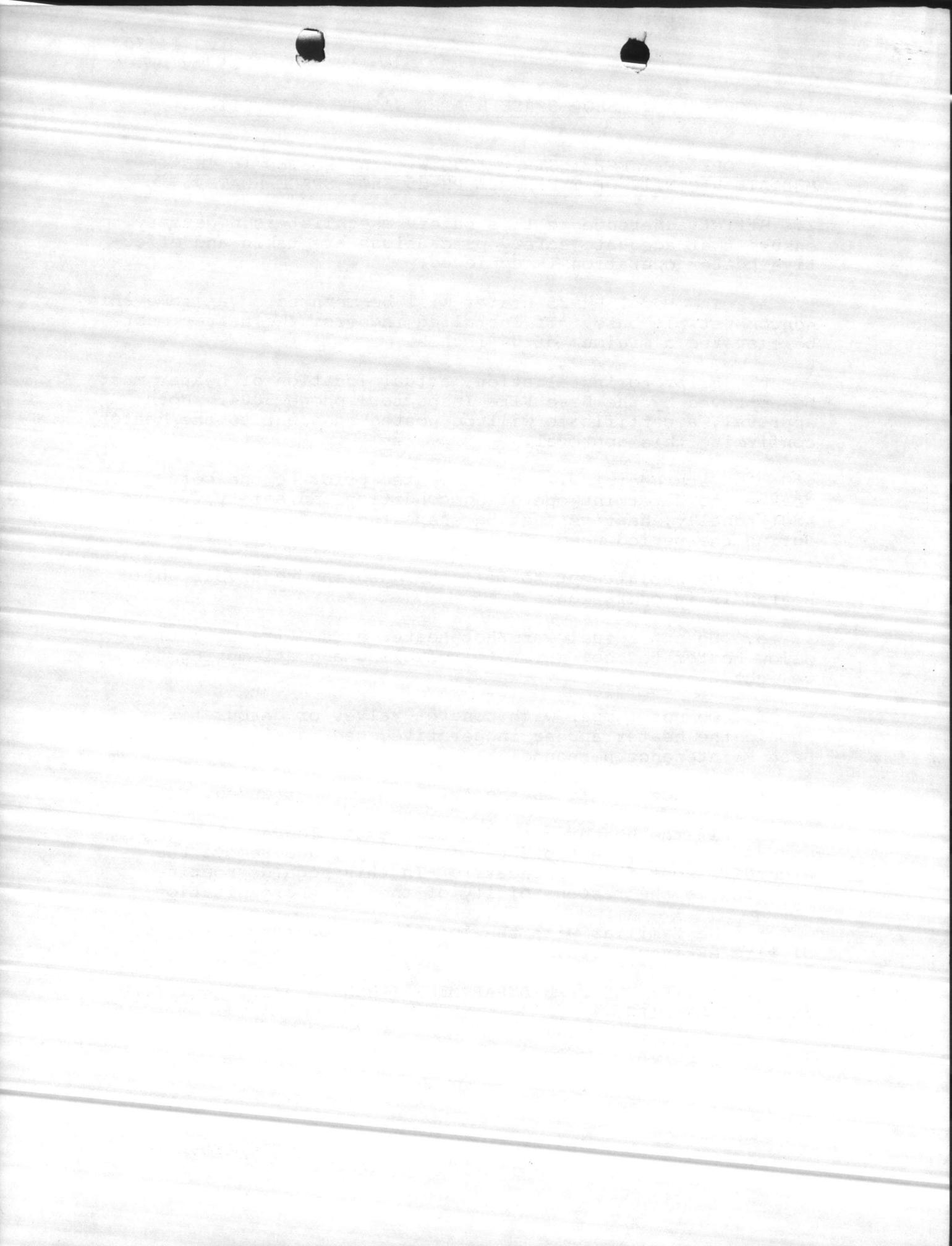
f. Do not tamper with control valves or carburetor. Should the heater appear inoperative, seek assistance from Base Maintenance personnel.

g. Do not permit the heater to burn unattended.

h. If the heater should become soot clogged, causing excessive smoke, shut off the fuel supply and remove the excessive soot from the heater. In this regard, routine cleaning is the responsibility of the using organization.

i. Be familiar with the location, proper type and use of fire extinguishers.

j. NOTIFY THE FIRE DEPARTMENT (PHONE 3333) IMMEDIATELY IN EVENT OF FIRE.



UNITED STATES MARINE CORPS
Headquarters
2d Marine Division, FMF
Camp Lejeune, North Carolina 28542

DivO 11370.1
4/LLW/jhl
13 Nov 1970

DIVISION ORDER 11370.1

From: Commanding General
To: Distribution List

Subj: Installation and Operation of the Model PH-25 Shop
Space Heater

Ref: (a) BO P11014.1C

Encl: (1) Model PH-25 Shop Space Heater Safety Instructions

1. Purpose. To publish instructions for installation and safe operation of the Model PH-25 shop space heater.

2. Background

a. In an effort to provide a suitable shop space heater capable of heating the various maintenance shops within this Division, the Model PH-25 was procured and issued. The characteristics and mechanical composition of this particular heater are a departure from the more common variety of heaters presently in use. In view of these complexities and safety considerations, attention must be focused on strict adherence to the instructions contained herein.

b. Although reference (a) provides for self help installation of heaters, this provision will not apply to the Model PH-25, unless specifically authorized in writing by this Headquarters.

3. Action. Commanding Officers of those units possessing the Model PH-25 shop space heater will ensure compliance with the following instructions:

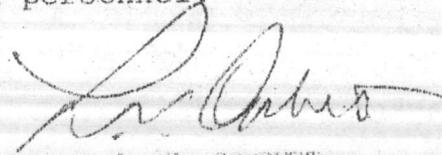
a. Requests for installation, relocation or repair will be accomplished as provided for in reference (a), except that self-help installation will not be conducted unless specifically authorized as outlined in paragraph 2.b. herein.

DivO 11370.1
13 Nov 1970

b. All instructional pamphlets and operating manuals, provided with the heaters, will be maintained by the using organization. These booklets must be readily available and safeguarded from loss.

c. A copy of enclosure (1) will be suitably protected and posted in the immediate vicinity of the Model PH-25 heater.

d. Using organizations are urged to conduct periodic training sessions for all personnel responsible for refueling, cleaning and operating these heaters. This informal but informative training should be conducted at shop level. Instruction will be based on the contents of this Order and the pamphlets discussed in paragraph 3.b. above. Only those personnel, so trained, will be permitted to operate the Model PH-25 heater. Organizations will maintain listings of qualified operators and publish such internal directives as required to ensure all personnel are informed that heaters will be operated only by qualified personnel.



L. V. CORBETT
Chief of Staff

DISTRIBUTION "A"

MODEL PH-25 SHOP SPACE HEATER SAFETY INSTRUCTIONS

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e. Do not refuel warm/hot heater after fire is out; allow heater to cool prior to refueling and attempting to relight.

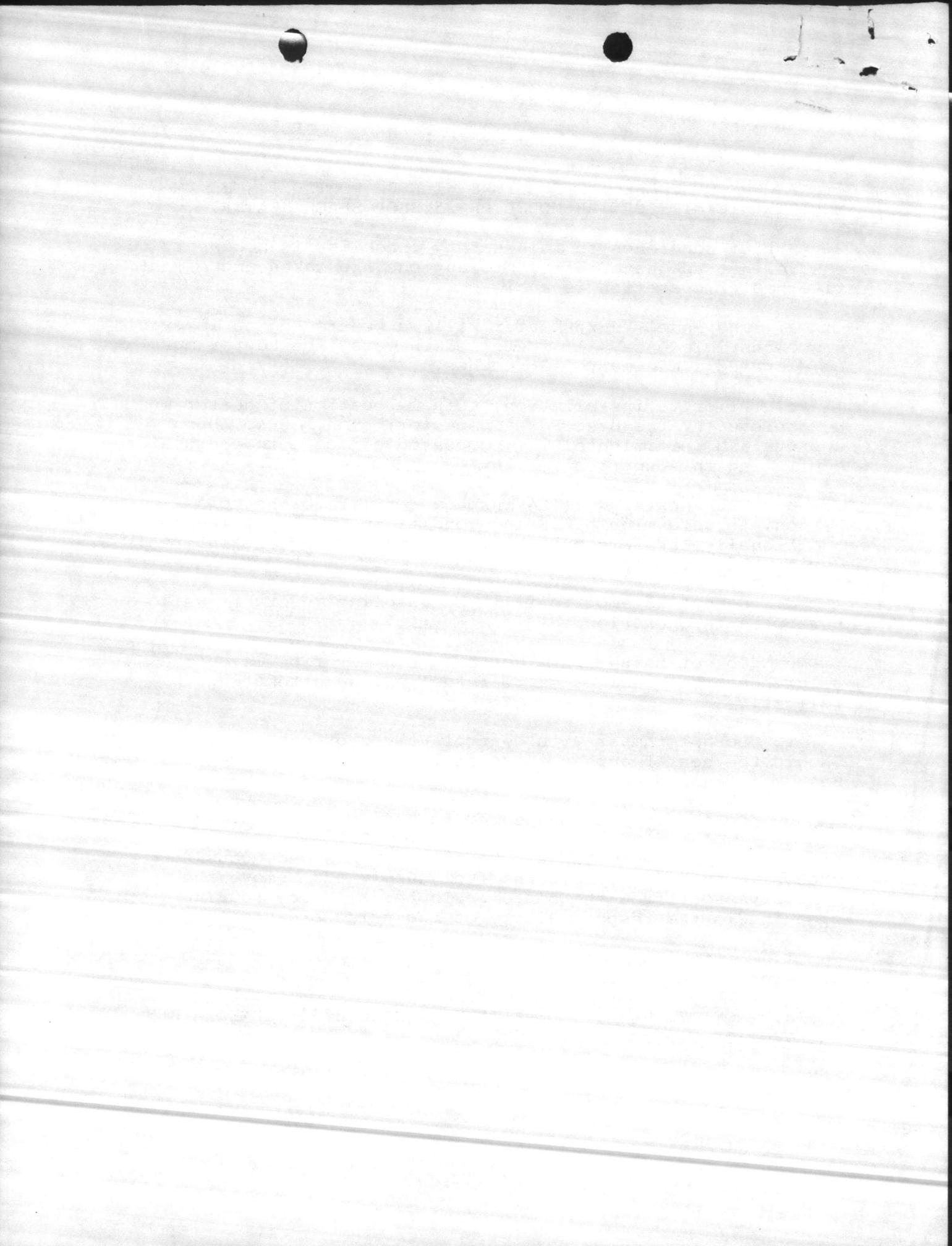
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h. If the heater should become soot clogged, causing excessive smoke, shut off the fuel supply and remove the excessive soot from the heater. In this regard, routine cleaning is the responsibility of the using organization.

i. Be familiar with the location, proper type and use of fire extinguishers.

j. NOTIFY THE FIRE DEPARTMENT (PHONE 3333) IMMEDIATELY IN EVENT OF FIRE.





830. 24 Nov
PH 5202

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

4B/RDB/awk
P11370
19 Nov 1970

MEMORANDUM FOR THE BASE FIRE CHIEF

Subj: Installation of Model PH-25 Shop Space Heater

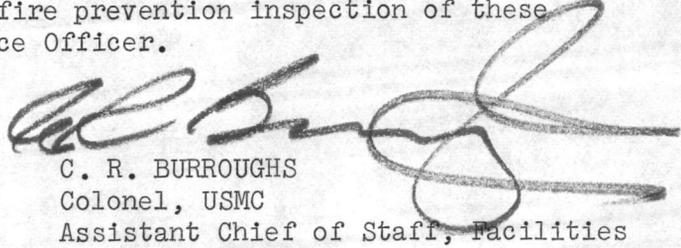
Ref: (a) CG, MCB, CLNC 1st end 4B/RDB/mkc over 4700 of 4 Nov 1970 on
CG, 2dMarDiv ltr 4/LLW/jhl over 11014 of 30 Oct 1970
(b) ACoS, Fac memo 4B/RDB/mkc over P11370 of 13 Nov 1970

1. Requests for installation of Model PH-25 shop heaters have been approved in the following buildings:

<u>Building Number</u>	<u>Quantity</u>
1801 ✓	1
1802 ✓	2
1804	2
1808	1 Not Used Heater
1823	1 No Heat
1825	1 Not Ready
1826 ✓	3 OK.
1827 ✓	3 OK
1828	3 Not Ready
*1817	4 Not Ready
1505	1 Not Ready
*1711	4 OK.
1810	Not Ready

*Previous installations requiring inspection only.

2. In accordance with reference (a), and in addition to reference (b), it is requested ^{that} you coordinate fire prevention inspection of these heaters with the Base Maintenance Officer.


C. R. BURROUGHS
Colonel, USMC
Assistant Chief of Staff, Facilities

Copy to:
BMaintO

10 Nov 1970
PLISSY
103 111 011



INSTALLATION FOR THE BARRIERS

Subject: Installation of Model PL-25 Trip Hesters

Ref: (a) OI, MOB, CING and end 40 11B mine over #400 of # Nov 1970 on
OO, ADMINS for # 1111 over 1111 of 30 Oct 1970
(b) MOE, the memo # 1111 over 1111 of 15 Nov 1970

1. Requests for installation of Model PL-25 trip hesters have been approved in the following buildings:

Quantity	Building Number
1	1001
2	1002
2	1004
1	1005
1	1006
1	1007
1	1008
1	1009
1	1010
1	1011
1	1012
1	1013
1	1014
1	1015
1	1016
1	1017
1	1018
1	1019
1	1020
1	1021
1	1022
1	1023
1	1024
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1	1091
1	1092
1	1093
1	1094
1	1095
1	1096
1	1097
1	1098
1	1099
1	1100

*Pl above installations regarding trip hesters only.

2. In accordance with reference (a) and in addition to reference (b),
it is requested that coordination and approval of the
request with the Base Maintenance Division.

C. H. BURROUGHS
Colonel, USAF
Assistant Chief of Staff, Security

Copy to:
Director



UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

4B/RDB/awk
P11370
19 Nov 1970

MEMORANDUM FOR THE BASE FIRE CHIEF

Subj: Installation of Model PH-25 Shop Space Heater

Ref: (a) CG, MCB, CLNC 1st end 4B/RDB/mkc over 4700 of 4 Nov 1970 on
CG, 2dMarDiv ltr 4/LLW/jhl over 11014 of 30 Oct 1970
(b) ACofS, Fac memo 4B/RDB/mkc over P11370 of 13 Nov 1970

1. Requests for installation of Model PH-25 shop heaters have been approved in the following buildings:

<u>Building Number</u>	<u>Quantity</u>
1801	1
1802	2
1804	2
1808	1
1823	1
1825	1
1826	3
1827	3
1828	3
*1817	4
1505	1
*1711	4

⁵⁹⁸
*Previous installations requiring inspection only.

2. In accordance with reference (a) and in addition to reference (b), it is requested ^{that} you coordinate fire prevention inspection of these heaters with the Base Maintenance Officer.

C. R. BURROUGHS
Colonel, USMC
Assistant Chief of Staff, Facilities

Copy to:
BMaintO

UNITED STATES MARINE CORPS

MARINE CORPS BASE

CAMP LEJUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

DATE

NOV 1971



ATTENTION OF THE BASE THE OFFICE

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... (faint text) ...

...

1	1001
2	1002
3	1003
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5	1005
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9	1009
10	1010
11	1011
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13	1013
14	1014
15	1015
16	1016
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92	1092
93	1093
94	1094
95	1095
96	1096
97	1097
98	1098
99	1099
100	1100

... (faint text) ...

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...



UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

4B/RDB/mkc
P11370
13 Nov 1970

MEMORANDUM FOR THE BASE FIRE CHIEF

Subj: Installation of Model PH-25 shop space heaters

Ref: (a) CG, MCB 1st end 4B/RDB/mkc over 4700 of 4 Nov 1970 on
CG, 2dMarDiv ltr 4/LLW/jhl 11014 of 30 Oct 1970

1. Requests for installation of Model PH-25 shop space heaters have been approved in the following buildings:

<u>Bldg. No.</u>	<u>Quantity</u>
230	1
576 (rear)	1
1406 (MI Maint Shop)	2
1604	1
1819	1
1841 (rear)	1
1841 (north end)	1
1842 (north end)	1

2. In accordance with reference (a), it is requested you coordinate fire prevention inspection of these heaters with the Base Maintenance Officer.

C. R. BURROUGHS
Colonel, USMC
Assistant Chief of Staff, Facilities

Copy to:
BMaintO

UNITED STATES MARINE CORPS

MARINE CORPS BASE

CAMP LEJUNE, NORTH CAROLINA 28542

REPORT REFER TO



DATE

13 OCT 1971

FOR THE DIRECTOR

TO THE DIRECTOR

FROM THE DIRECTOR

RE: [Illegible]

[Illegible]

[Illegible]

100

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Checked P425 Heater
Bldg 402-1

~~4~~

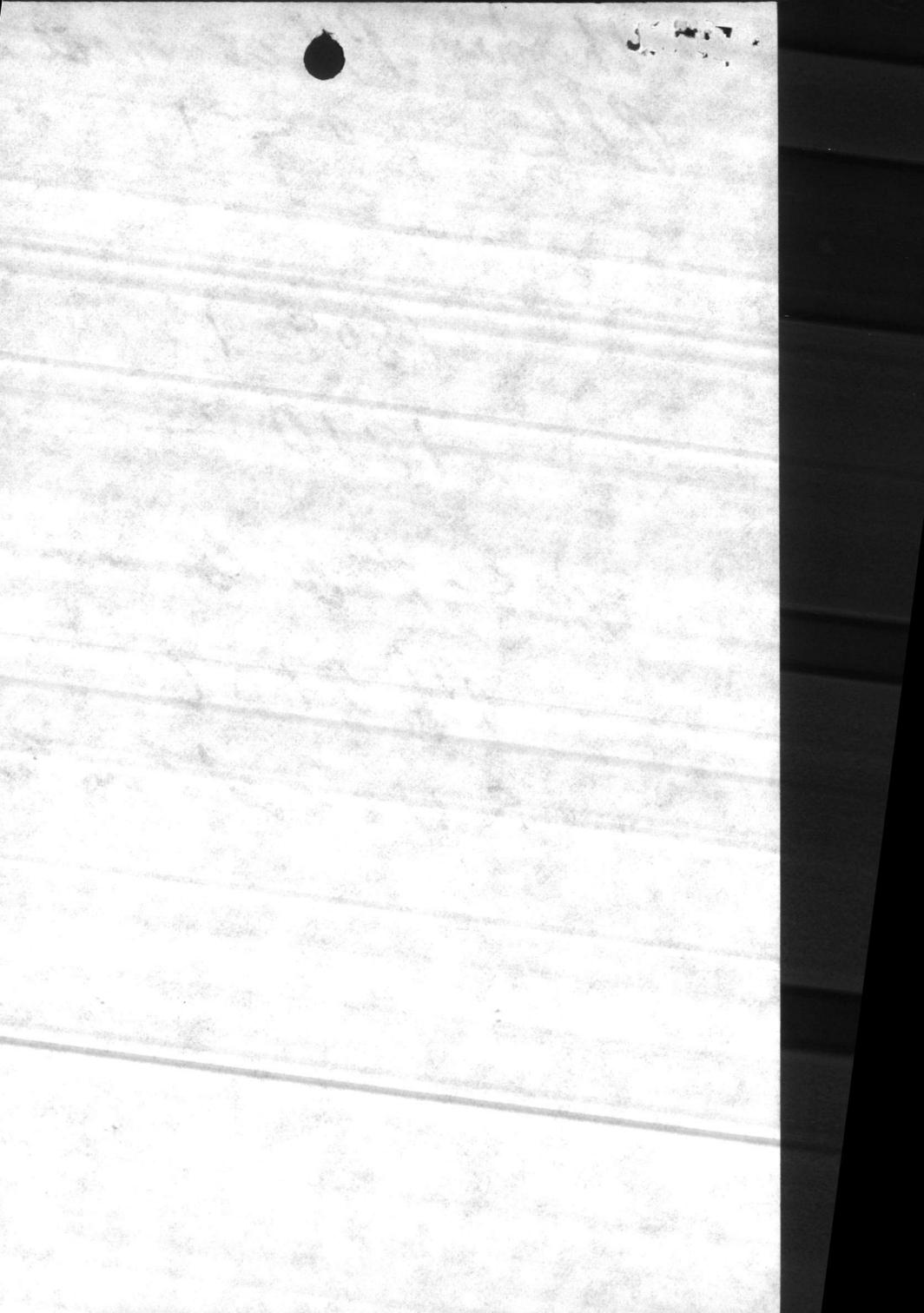
1809 1

1810 2

PM Sgt O'Connor

Ph 5107.

S 4 2nd Eng Bn.



1808 OK
 1810
 1811
 402

Montford Pt
 M-120-119
 121. 2 heater Ph 25
 in each. Ph 4.
 Bldg-203. 2 heater

11-24-20

Heater PH 25
 1310 OK
 1311 OK
 1802 Not Ready
 1801 Not Ready
~~1810 Not Ready~~
 1804 OK
 1826 - ~~OK~~ 2 Heater OK
 1827 - 3 Heater OK
 1809 - 1 " " OK
 1711. 4. OK
 1817. 4 not ready
 1805 1 not ready
 1809
~~insp 230~~

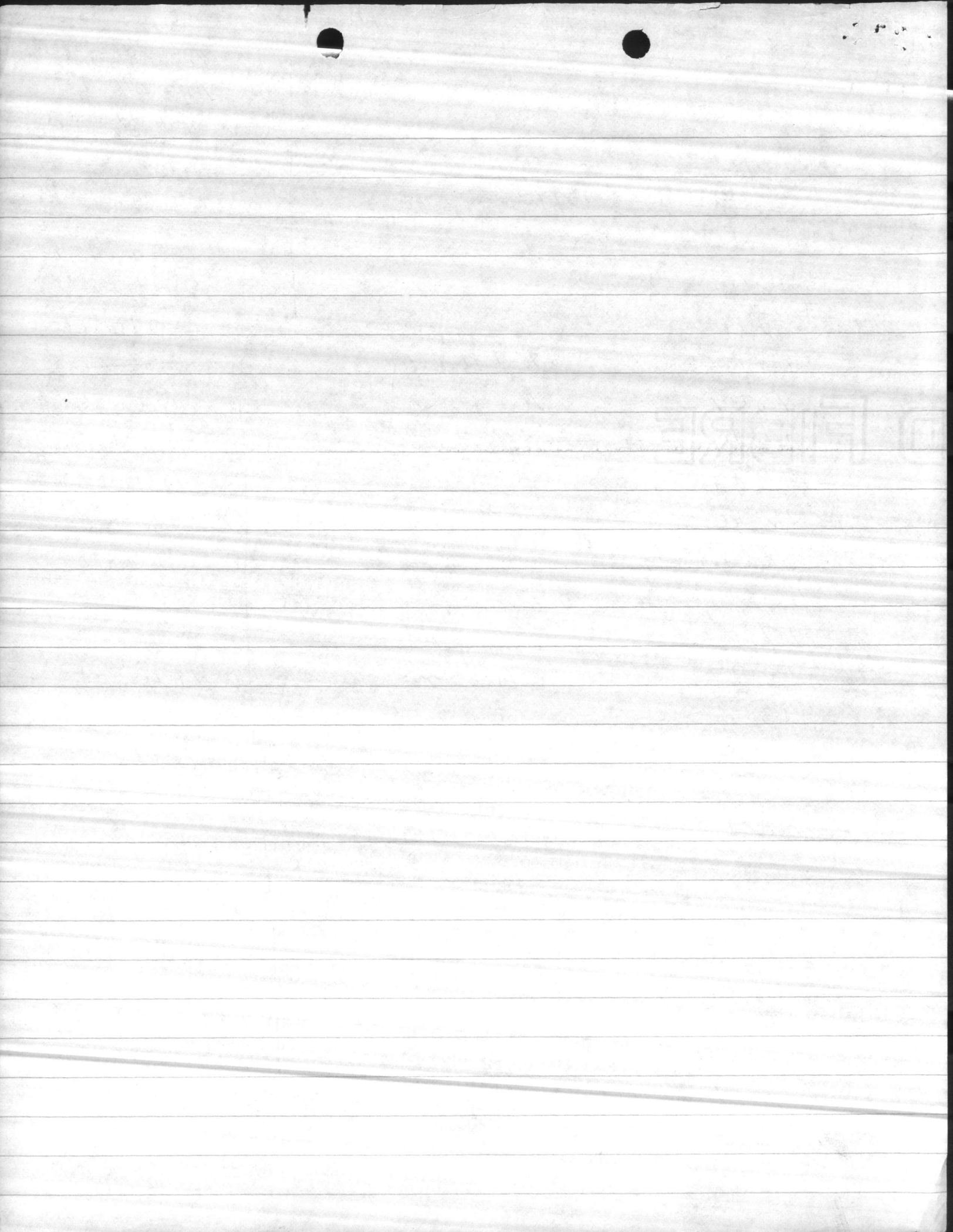
255. 2 heater
 113-1 heater
 122. 1 heater
 619. 1 heater

Nov-25-1970
 insp heater Ph 25
 BA-138
~~1810~~
 1810.

1841-OK
 1842-OK

Heater Ph 25-

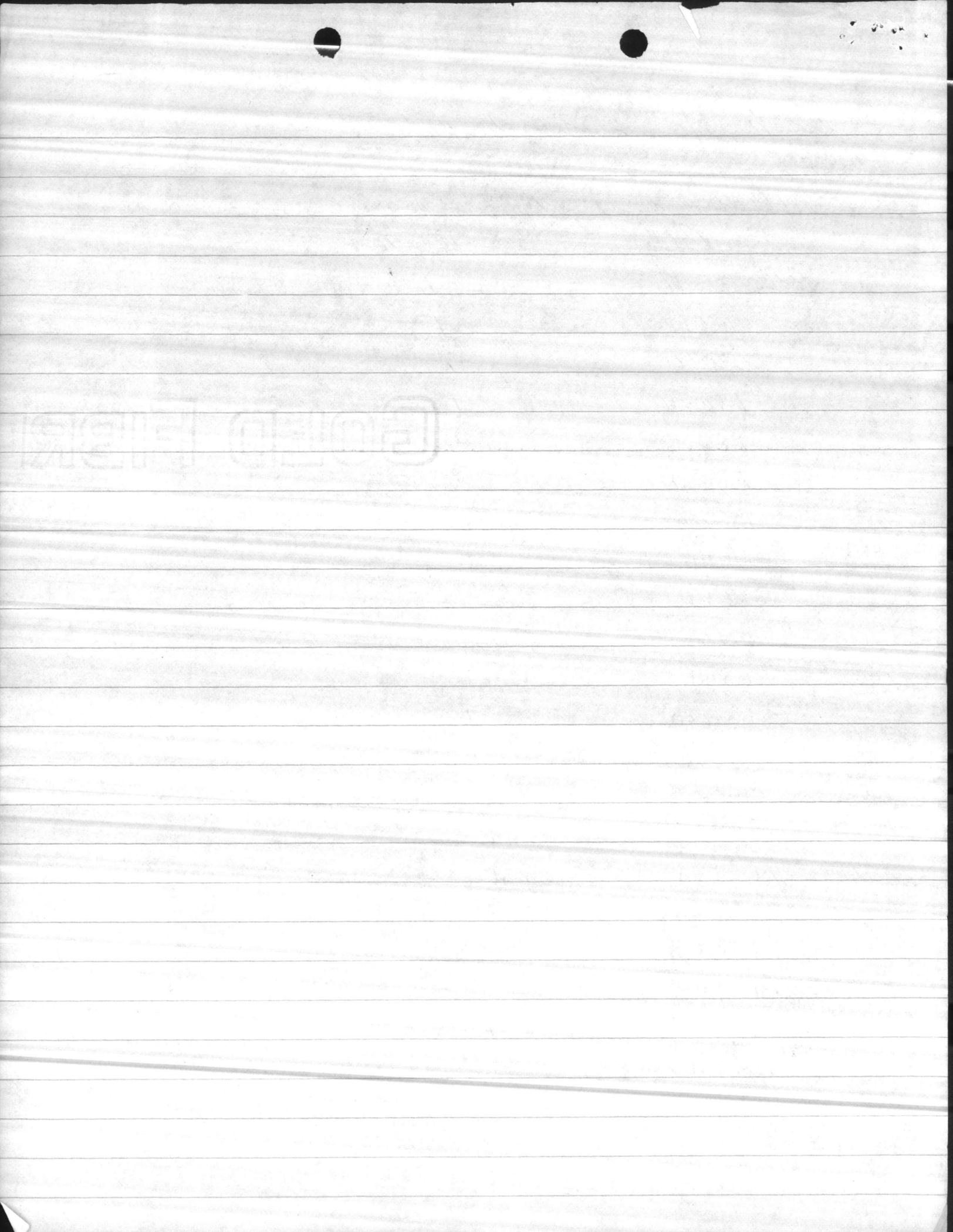
Bldg 230 ✓
 402
 576 ✓
 1406 ✓
~~1819~~
~~1841~~ OK
~~1842~~
 1311 OK
 1310. OK



map of heater MODEL Ph-25.

Heater map Nov. 24 1970.

Bldg.	Heater
Bldg 1310	1.
1311	1
1810	1.
1804	1
1826	2.
1827.	3.
1809	1
1711	4.
1817.	4.
576	1
1841	1
1842	1
7	1
Bldg M. 120.	1
M 119	1
M 121	2
M 255	2
M. 203	2.
M. 113	1
M-619.	1.
BA-138	1



5575

SP-25 Heater

Bldg 1505 OK

Bldg 1828 3 heater ~~OK~~ # OK. 2. Not Ready.

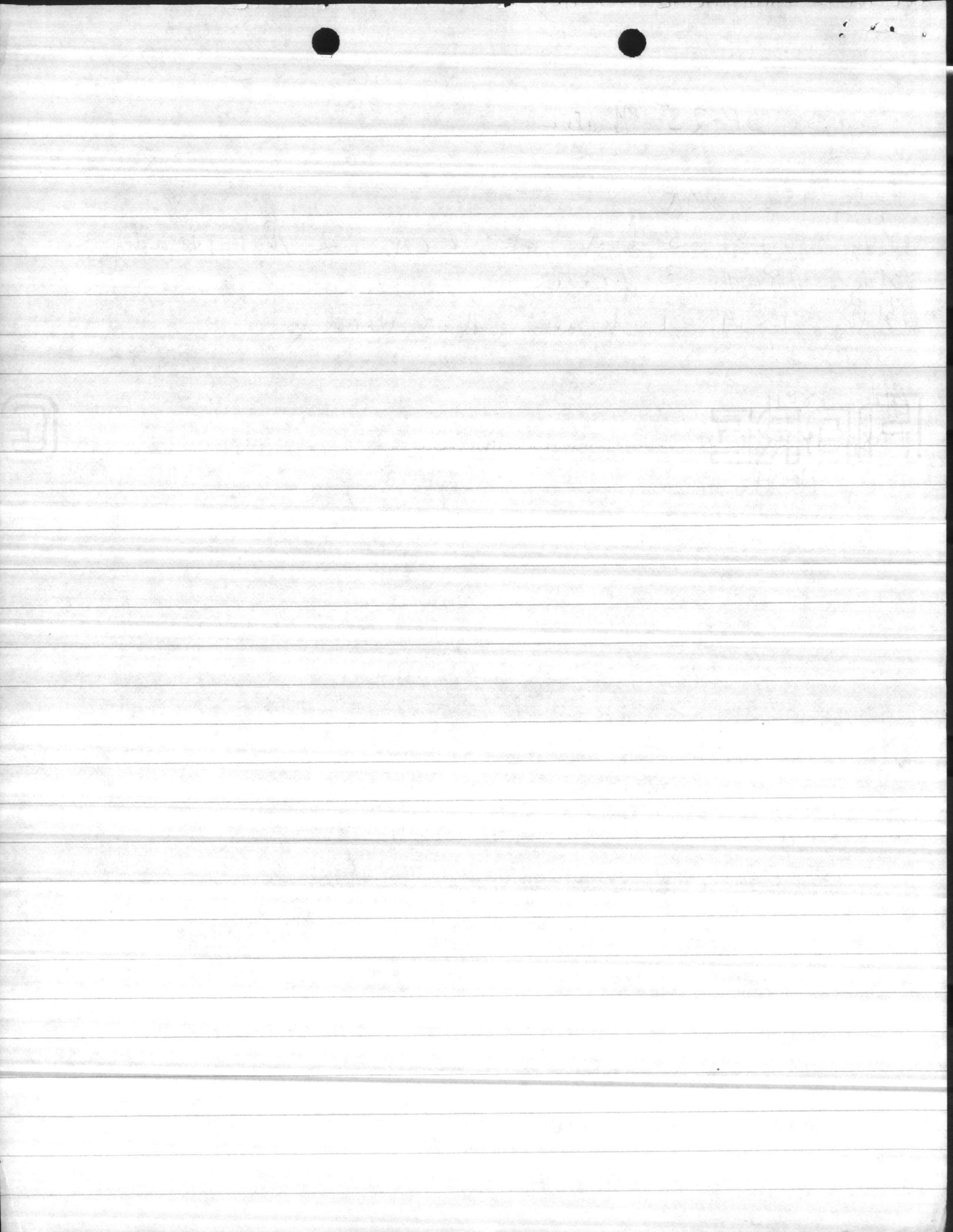
Bldg 1809 3 heater

Bldg 1819. 1 heater Not Ready

Bldg 1804

Bldg 1802

Bldg 1604.

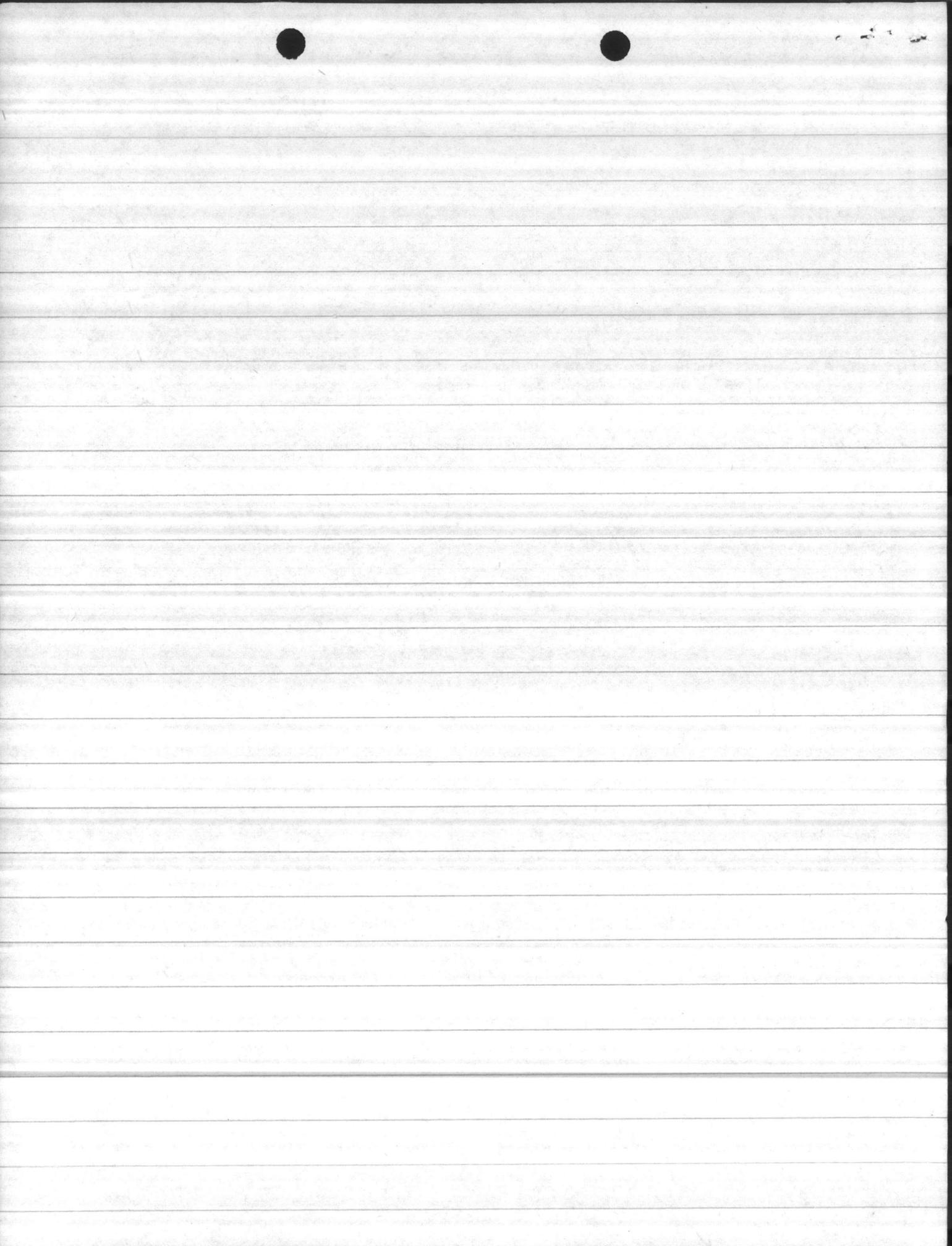


Dec 8 1970

53 Heats Ph-25

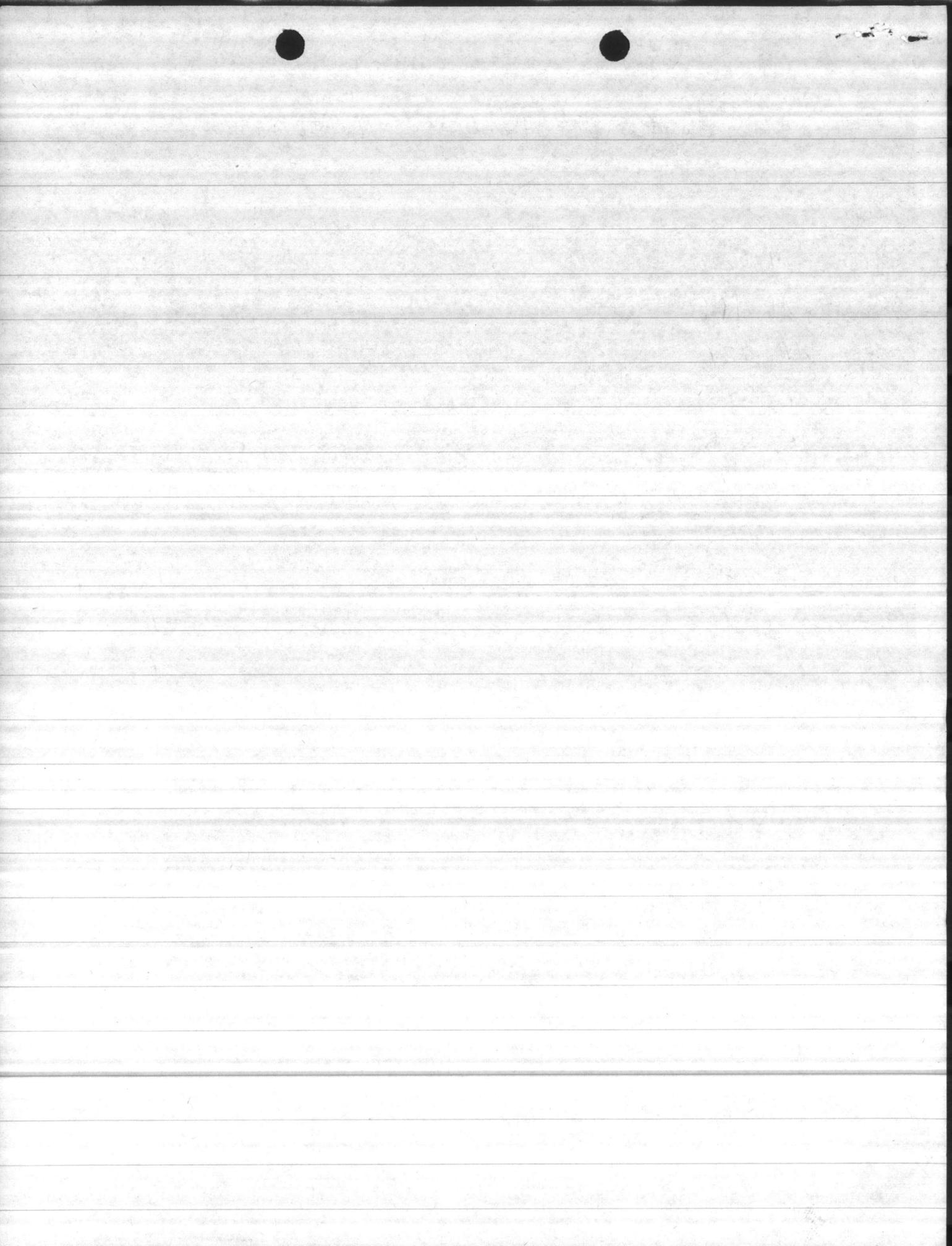
Section SP-25 Heats

		Number Heats	
Bldg.		Heats	
Bldg.	1310	1	✓
Bldg.	1311	1	✓
Bldg.	1802.	1	✓
Bldg.	1801	1	✓
Bldg.	1804	2	✓
Bldg.	1810	2	✓
Bldg.	1809.	3	✓
Bldg.	1826	2	✓
Bldg.	1827.	3	✓
Bldg.	1828	3	✓
Bldg.	1711	4	✓
Bldg.	1505	1	✓
Bldg.	1817.	3	✓
Bldg.	230	1	✓
Bldg.	202	1	✓
Bldg.	576	1	✓
Bldg.	1406	2	✓
Bldg.	1841	3	✓
Bldg.	1842	1	✓
Bldg.	7.	1	✓
Bldg.	1604	1	✓
Bldg.	1819.	1	✓
Bldg.	45	1	✓
Bldg.	1703	1	✓



Lectern PH-25 Heater

Bldg.	Heater
Bldg. M 120	2. ✓
Bldg. M. 119	2. ✓
Bldg. M. 121.	2. ✓
Bldg. M. 255	2. ✓
Bldg. M. 203	2. ✓
Bldg. M 113.	1. ✓
Bldg. M 619.	1. ✓
Bldg. BA-138	1. ✓
Bldg. BA-152	1. ✓
Bldg. 780 -	1. ✓



HEADQUARTERS
2d Marine Division, FMF
Camp Lejeune, N. C. 28542

DivO 4700.7
4/LLW/gwd
8 DEC 1953

DIVISION ORDER 4700.7

From: Commanding General
To: Distribution List

Subj: Ingersol-Rand Heaters; installation and operation of

Encl: (1) Fire Safety Rules for the Operation of Ingersol-Rand Heaters

1. Purpose. To promulgate safety instructions to permit the re-installation of the subject heaters on a limited-use basis.

2. Background. Until recently the Ingersol-Rand heater has been restricted from use throughout the Camp Lejeune area. As this heater was the only model capable of heating open work areas of large maintenance shops, this Headquarters requested reevaluation of the restrictions imposed. Consequently, the ban was lifted and use of the heater was approved with certain limitations.

3. Action

a. The use of the subject heater will be limited to those spaces/areas where a standard space heater will not suffice, i.e., large maintenance areas open or exposed to the wind. Units not having an absolute requirement for the Ingersol-Rand heaters will turn them in to Base Property as excess.

b. In addition to enclosure (1), using units will comply with the following:

(1) Ingersol-Rand heaters will not be lighted unless a watch is assigned; the heater will be tended to at all times during operation.

(2) Unless warranted by low temperatures the heater will not be lighted.

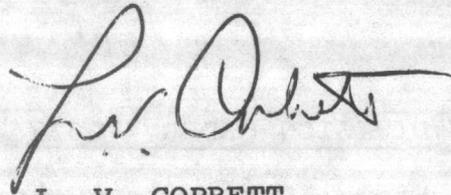
c. A copy of enclosure (1) will be posted at each heater location and the contents made known to each person

DivO 4700.7

8 DEC 1969

assigned to duties in the vicinity of these heaters.

DISTRIBUTION: "A" plus
CG, MCB (4)



L. V. CORBETT
Chief of Staff

DivO 4700.7
8 DEC 1969

FIRE SAFETY RULES FOR THE OPERATION OF INGERSOLL-RAND HEATERS

~~1. Heater must be mounted on an immovable noncombustible base. Heater must be secured to the base. Bottom of heater must be at least 36" from the floor. A noncombustible wire fence will be installed in such a manner as to provide at least 5' clearance on all sides of heater. Fence will be a minimum of 5' in height.~~

~~2. Prior to installation of heater, location and wiring leading to heater must be approved by the Base Fire Inspector, phone 3004, and a certificate of approval must be posted adjacent to heater.~~

~~3. If installation of heater is to be in a building where motor vehicles or gasoline driven engines of any type are being serviced or repaired, each such vehicle will be degassed prior to entry into the building.~~

~~4. Each oil burning heater should be inspected by an authorized mechanic prior to the heating season. In addition, heaters should be inspected several times during the period used.~~

~~5. Do not attempt to fill the ~~fuel~~ oil reservoir while heater is in operation.~~

~~6. Do not tamper with control valves or carburetor if heater does not operate properly. Request the services of a qualified oil heater mechanic.~~

~~7. Do not put ~~fuel~~ oil into the heater after it has gone out and is still hot. Wait until it has cooled off before turning on the oil and lighting.~~

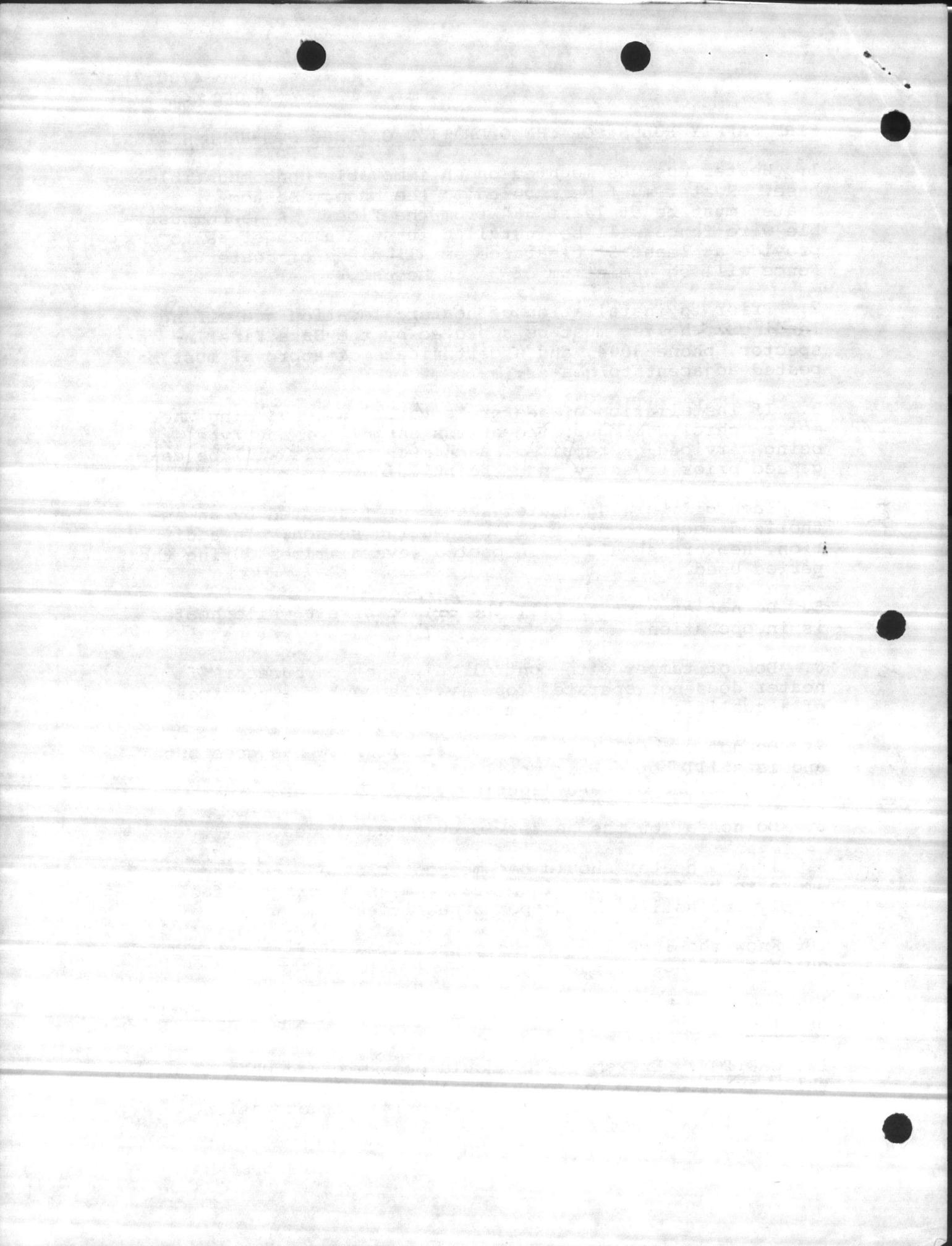
~~8. Do not allow the heater to burn unattended.~~

~~9. If the heater should become soot clogged, causing smoke to be forced out into the room, shut off the fuel supply and notify the proper authorities.~~

~~10. Know the location of the proper type of fire extinguisher and how to use it.~~

~~11. NOTIFY THE FIRE DEPARTMENT (3333) IMMEDIATELY IN EVENT OF FIRE.~~

~~12. CAUTION: Extreme care should be exercised when using this unvented type of appliance in an enclosed area. Carbon monoxide fumes are given off during its operation.~~



HEADQUARTERS
2d Marine Division, FMF
Camp Lejeune, N. C. 28542

DivO 4700.7
4/LLW/gwd
8 DEC 1953

DIVISION ORDER 4700.7

From: Commanding General
To: Distribution List

Subj: Ingersol-Rand Heaters; installation and operation of

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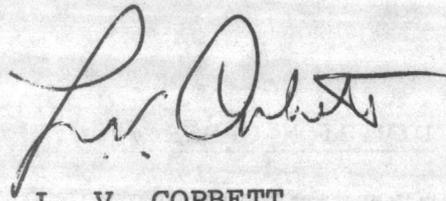
(2) Unless warranted by low temperatures the heater will not be lighted.

c. A copy of enclosure (1) will be posted at each heater location and the contents made known to each person

DivO 4700.7
8 DEC 1969

assigned to duties in the vicinity of these heaters.

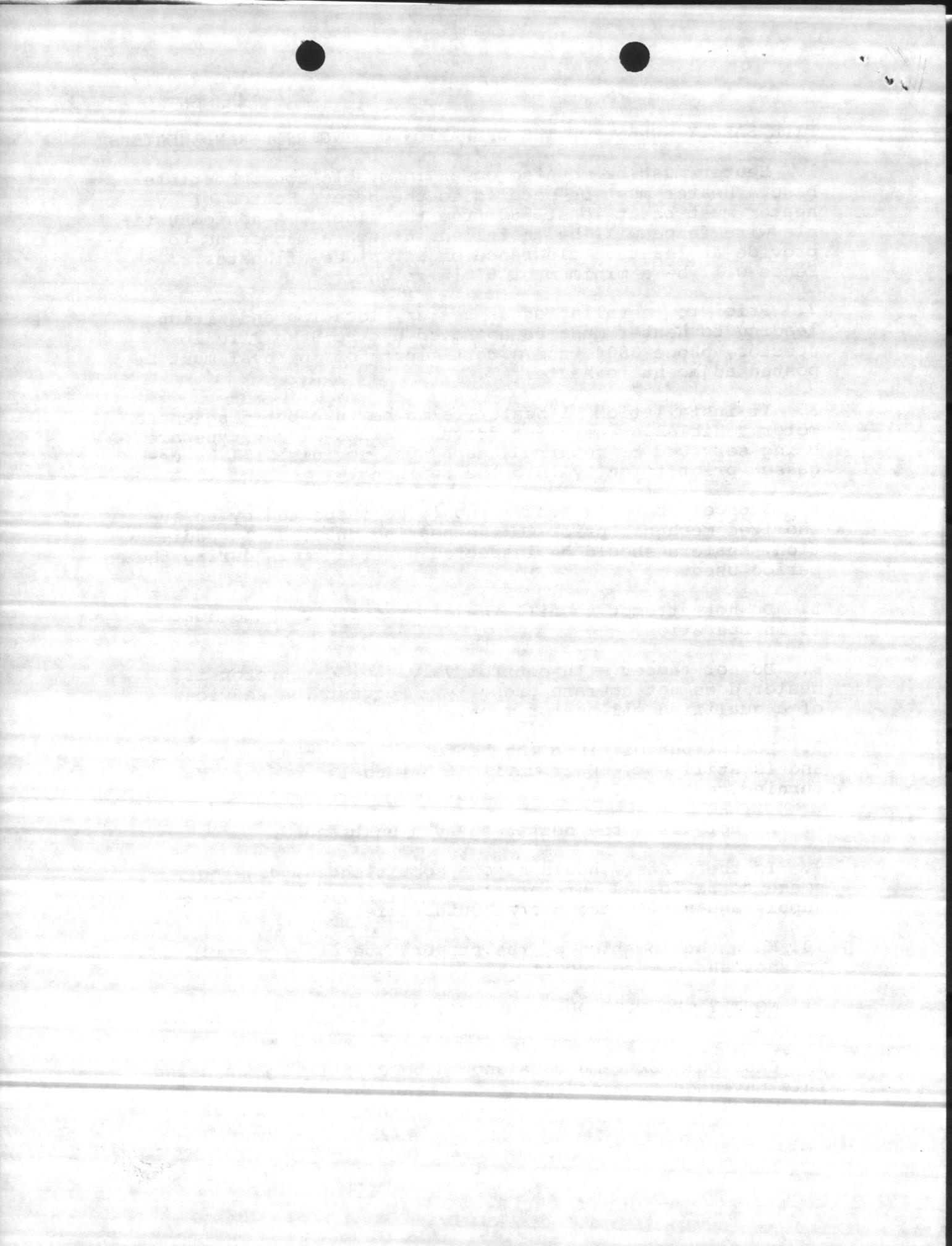
DISTRIBUTION: "A" plus
CG, MCB (4)



L. V. CORBETT
Chief of Staff

FIRE SAFETY RULES FOR THE OPERATION OF INGERSOL-RAND HEATERS

1. Heater must be mounted on an immovable noncombustible base. Heater must be secured to the base. Bottom of heater must be at least 36" from the floor. A noncombustible wire fence will be installed in such a manner as to provide at least 5' clearance on all sides of heater. Fence will be a minimum of 5' in height.
2. Prior to installation of heater, location and wiring leading to heater must be approved by the Base Fire Inspector, phone 3004, and a certificate of approval must be posted adjacent to heater.
3. If installation of heater is to be in a building where motor vehicles or gasoline driven engines of any type are being serviced or repaired, each such vehicle will be degassed prior to entry into the building.
4. Each oil burning heater should be inspected by an authorized mechanic prior to the heating season. In addition, heaters should be inspected several times during the period used.
5. Do not attempt to fill the oil reservoir while heater is in operation.
6. Do not tamper with control valves or carburetor if heater does not operate properly. Request the services of a qualified oil heater mechanic.
7. Do not put oil into the heater after it has gone out and is still hot. Wait until it has cooled off before turning on the oil and lighting.
8. Do not allow the heater to burn unattended.
9. If the heater should become soot clogged, causing smoke to be forced out into the room, shut off the fuel supply and notify the proper authorities.
10. Know the location of the proper type of fire extinguisher and how to use it.
11. NOTIFY THE FIRE DEPARTMENT (3333) IMMEDIATELY IN EVENT OF FIRE.
12. CAUTION: Extreme care should be exercised when using this unvented type of appliance in an enclosed area. Carbon monoxide fumes are given off during its operation.



4B/RDB/mkc
4700
4 Nov 1970

FIRST ENDORSEMENT on CG, 2dMarDiv ltr 4/LLW/jhl 11014 of 30 Oct 1970

From: Commanding General, Marine Corps Base, Camp Lejeune,
North Carolina 28542

To: Commanding General, 2d Marine Division, FMF

Subj: Installation of Shop Space Heaters, Duct Type, Model PH-25

1. Returned.
2. Inspection of the proposed site locations of these heaters indicates the need for installation by Base Maintenance Department on a case-by-case basis, and requiring inspection by the Base Fire Department.
3. In view of the above, the following procedure is established to facilitate installation:
 - a. Request for installation of the duct type heater will be submitted in triplicate on NAVDOCKS 2351 to the Base Maintenance Officer and will include a statement of the exact site location by building number.
 - b. The Base Maintenance Officer will inspect and approve the site location, and fabricate and install the necessary window/wall jacks, pipes and elbows, where required.
 - c. The Base Fire Chief will inspect the installation of the heater and issue a certificate of acceptance.
4. By copy hereof, the Base Maintenance Officer and Base Fire Chief will implement the subject installation/inspection.

C. R. BURROUGHS
By direction

Copy to:
BmaintO
BFireChief



HEADQUARTERS
2d Marine Division, FMF
Camp Lejeune, North Carolina 28542

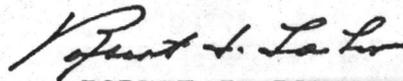
4/LLW/jhl
11014
30 OCT 1970

From: Commanding General
To: Commanding General, Marine Corps Base, Camp Lejeune,
North Carolina 28542 (Attn: ACofS, Facilities)

Subj: Installation of Shop Space Heaters, Duct Type,
Model PH-25

Ref: (a) BO P11014.1C

1. This Division is presently in receipt of 44 of the subject heaters which have been distributed to 11 organizations. These new heaters remain in their packing as received from Base Property.
2. The size, technical nature of the heater design and fire and safety considerations require a determination as to proper installation agency prior to further action within this Division. That portion of reference (a), which provides for self help installation of heaters (paragraph 3005), does not appear entirely applicable in this case, due to possible fire and safety hazards.
3. Should it be determined that installation be accomplished by the addressee, this Headquarters is prepared to provide necessary labor crews, working under technical supervision of qualified Marine Corps Base personnel, to expedite such installation.
4. In view of possible installation difficulties, and the impending cold season, it is requested that this matter be given appropriate priority.



ROBERT J. LAHR
By direction

Copy to:
ACofS, SupSvcs
B Prop ContO
GPCO



FIRE SAFETY RULES FOR THE OPERATION OF HEATERS, DUCT TYPE, MODEL PH-25

1. To assure a safe operation of the subject type heaters, the following rules should be applied:

a. Heater must be mounted on an immovable noncombustible base. Bottom of heater must be at least 36" from the floor, if heater is installed in a garage.

b. Prior to installation of heater, location must be approved by the Base Fire Inspector, phone 3004, and a certificate of approval must be posted adjacent to heater.

c. Each heater should be inspected by an authorized mechanic prior to the heating season. In addition, heaters should be inspected several times during the period used.

d. Do not attempt to fill the gasoline reservoir while heater is in operation.

e. Do not tamper with control valves or carburetor if heater does not operate properly. Request the services of a qualified heater mechanic.

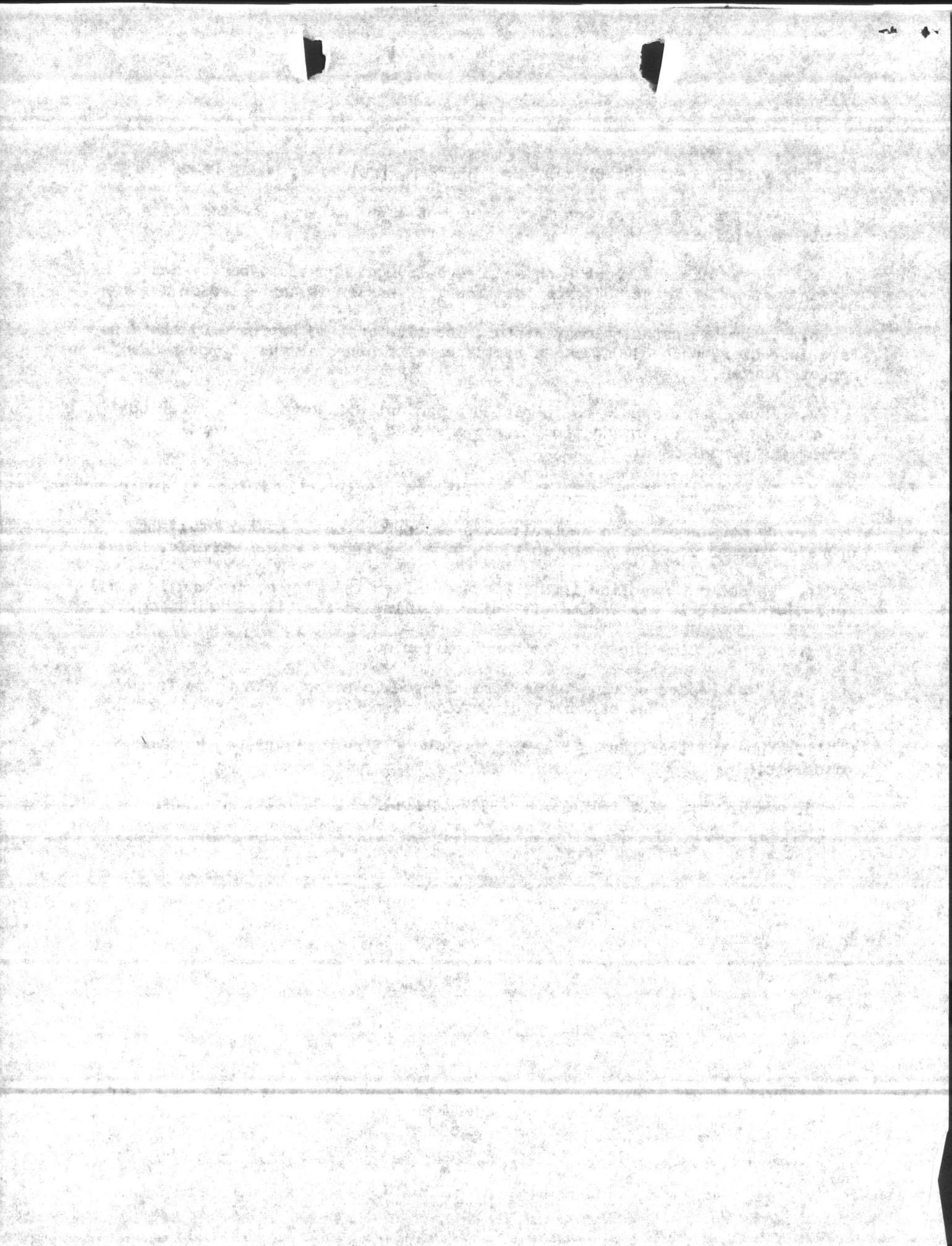
f. Do not put gasoline into the heater after it has gone out and is still hot. Wait until it has cooled off before turning on the oil and lighting.

g. Do not allow the heater to burn unattended.

h. If the heater should become soot clogged, causing smoke to be forced out into the room, shut off the fuel supply and notify the proper authorities.

i. Know the location of the proper type of fire extinguisher and how to use it.

j. NOTIFY THE FIRE DEPARTMENT (3333) IMMEDIATELY IN EVENT OF FIRE.



Inspector's Copy

BASE FIRE DEPARTMENT
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

27/CBW/mws
21 April 1970

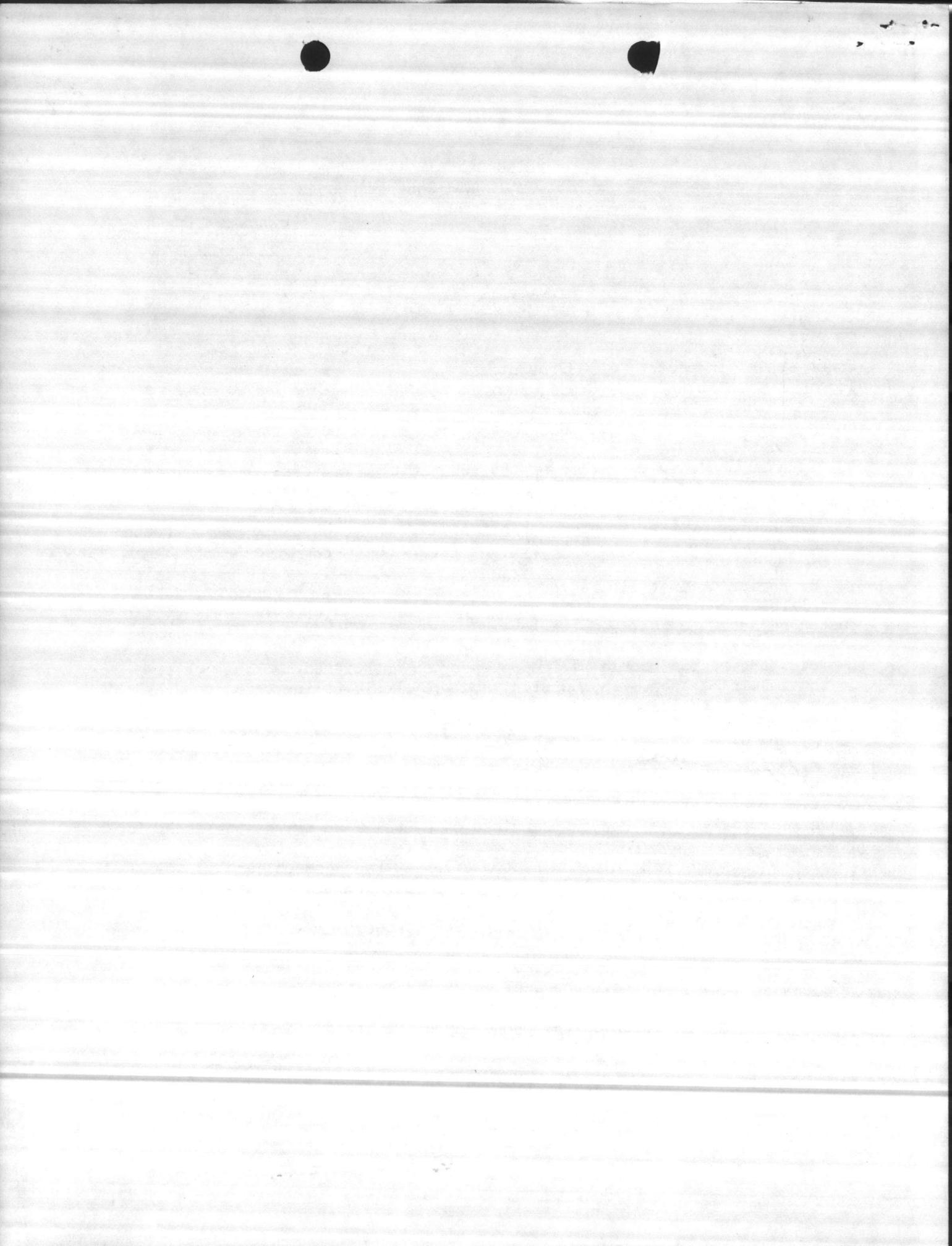
MEMORANDUM

From: Chief Inspector, Fire Prevention
To: Assistant Chief of Staff, Facilities

Subj: Heaters, Duct Type, Model PH-25; fire safety rules for operation of

1. To assure a safe operation of the subject type heaters, the following rules should be applied:

- a. Heater must be mounted on an immovable noncombustible base. Bottom of heater must be at least 36" from the floor. *if heater install ~~at~~ garage.*
- b. Prior to installation of heater, location must be approved by the Base Fire Inspector, phone 3004, and a certificate of approval must be posted adjacent to heater.
- c. Each heater should be inspected by an authorized mechanic prior to the heating season. In addition, heaters should be inspected several times during the period used.
- d. Do not attempt to fill the ~~oil~~ *gas* reservoir while heater is in operation.
- e. Do not tamper with control valves or carburetor if heater does not operate properly. Request the services of a qualified ~~oil~~ heater mechanic.
- f. Do not put ~~oil~~ *gas* into the heater after it has gone out and is still hot. Wait until it has cooled off before turning on the oil and lighting.
- g. Do not allow the heater to burn unattended.
- h. If the heater should become soot clogged, causing smoke to be forced out into the room, shut off the fuel supply and notify the proper authorities.
- i. Know the location of the proper type of fire extinguisher and how to use it.
- j. NOTIFY THE FIRE DEPARTMENT (3333) IMMEDIATELY IN EVENT OF FIRE.



File Copy

HEADQUARTERS
2d Marine Division, FMF
Camp Lejeune, North Carolina 28542

3:JAM:jam
4700
12 October 1970

From: Noncommissioned Officer in Charge, Division NBC Section
To: Supply Officer, Headquarters Battalion
Via: Chief Fire Inspector, MCB, Camp Lejeune, North Carolina
Subj: Electric Heaters, request for

1. It is requested that this section be issued two electric heaters for building number 935.
2. At the present time there is no heating facilities located within this building. There were no provisions for venting a fuel oil type burner, when this building was constructed. It is not feasible to vent an oil space heater through a window pane, because of the present installation of solid glass, gas tight, windows.

J. A. MILLER
MSgt USMC

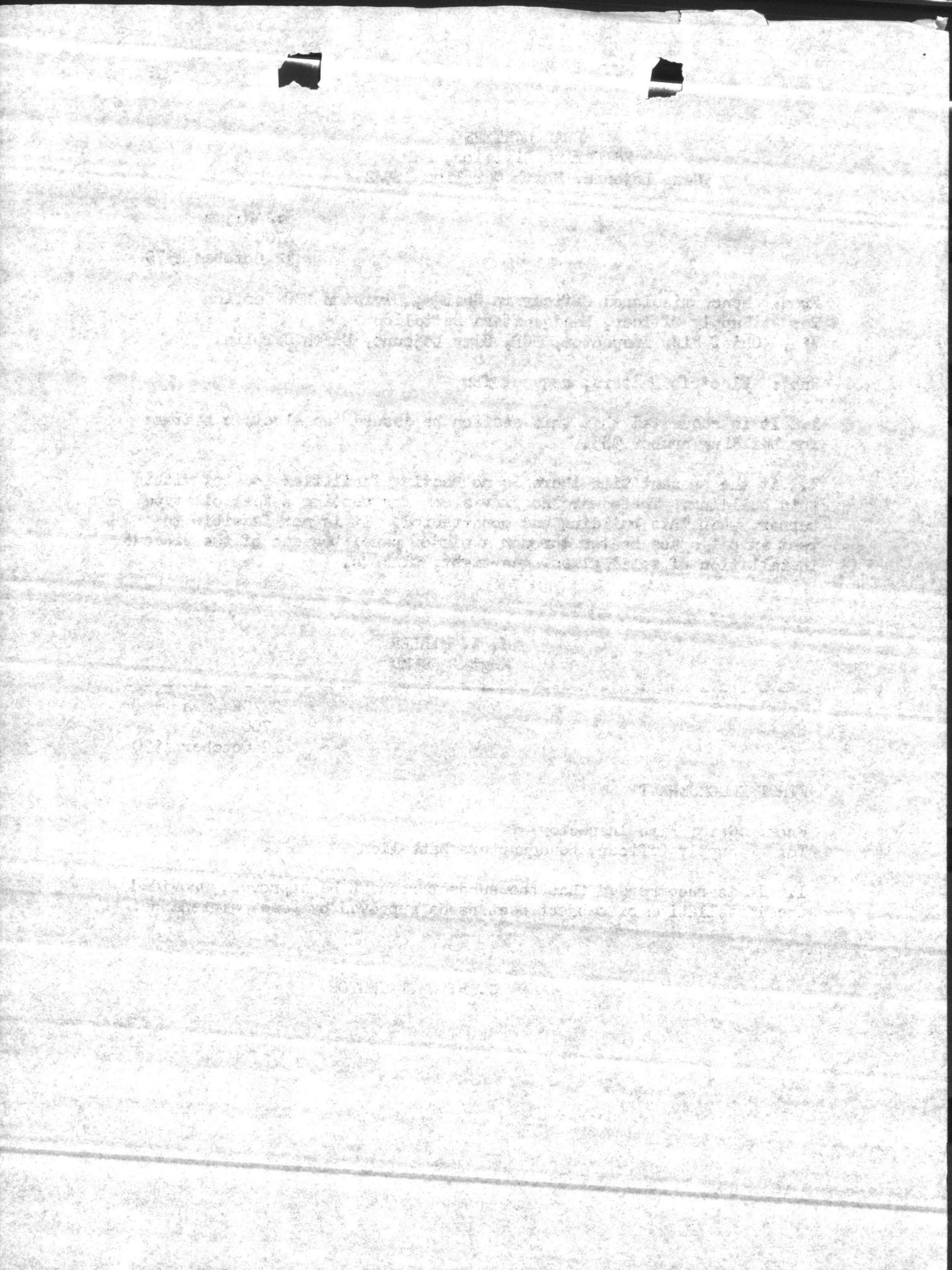
27/CBW/mws
4700
12 October 1970

FIRST ENDORSEMENT

From: Chief Fire Inspector
To: Supply Officer, Headquarters Battalion

1. It is recommended that the subject request be approved, provided the installation of subject heaters be approved by Base Maintenance.

C. B. WHITTINGTON



~~5854~~

Mr. Wigger Ph. 5854
Naval insp

Portable heater 250,000 BTU - Model R125
New heater installed

2 - Heater M-113

2 - heater M-119

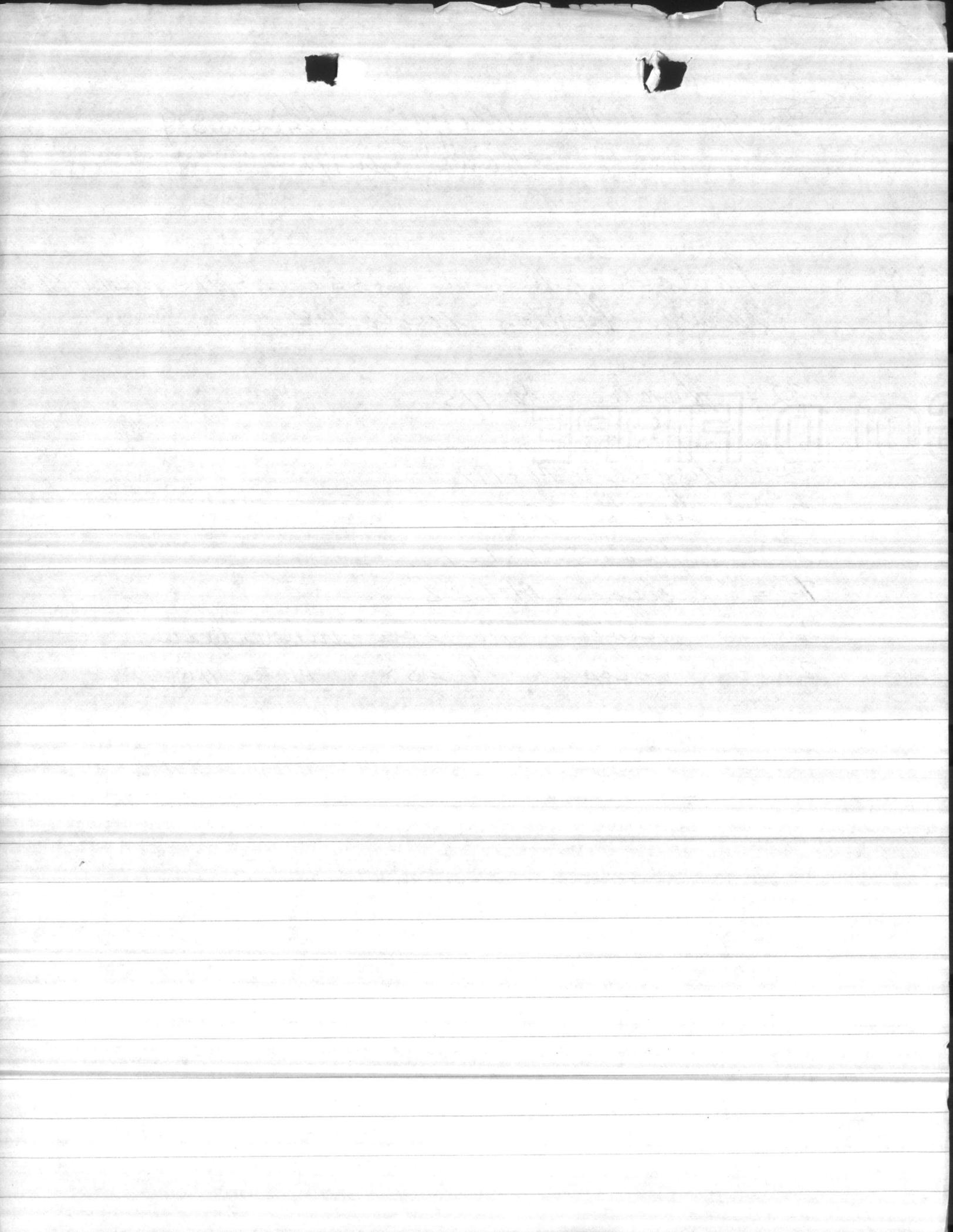
2 - heater M-120

2 - heaters M-121

2 - heater M-122

2 - heater M-203 mixed heat

2 - heater M-288 heater outside





UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO
4B/LD/awk
4700/1
30 Jun 1970

From: Commanding General
To: Commanding General, 2d Marine Division, FMP (Attn: Assistant
Chief of Staff, G-4)

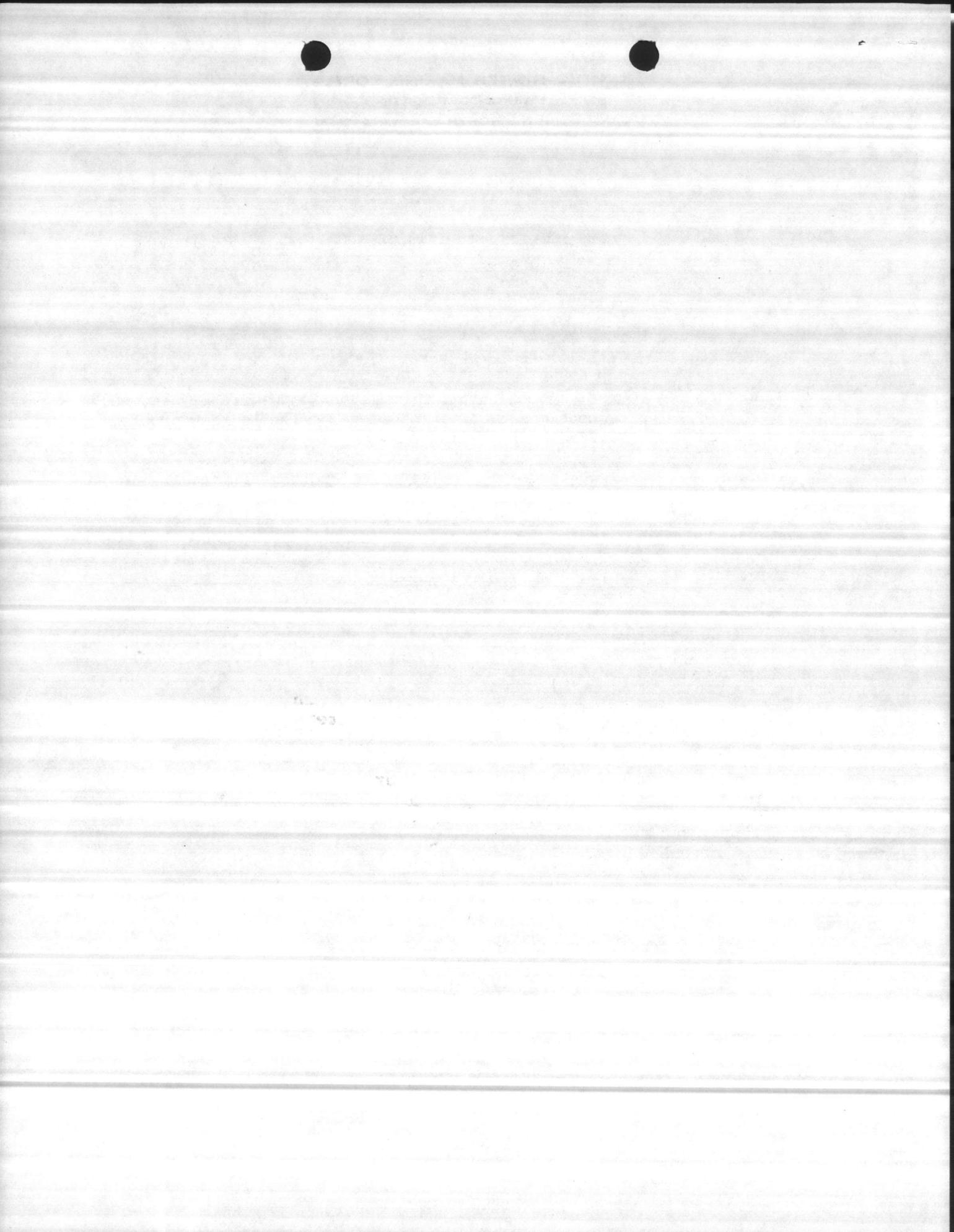
Subj: Heating of Shop Spaces

Ref: (a) CG, 2d MarDiv ltr 4/SIB/bea over 4400 of 26 Mar 1970
(b) CG, MCB, CLNC ltr 4B/LD/mkc over 4700 of 29 Apr 1970

1. Reference (a) requested consideration be given to the use of heaters, portable, 250,000 BTU, model PH25, as a solution for the heating problem within the 2d Marine Division shop buildings.
2. A requisition will be submitted in the first quarter of fiscal year 1971 for 44 heaters, FSN 4520-752-9458, with a required deadline date of 1 September 1970. It is requested you notify the units involved to submit their Form DD 1348 requisitions to the Base Property Control Officer, with a copy of your notification to this Headquarters (Attn: Assistant Chief of Staff, Supply Services) for control purposes.
3. The heaters are to be used in accordance with the instructions provided by reference (b), except the immovable, noncombustible base will be required only in those buildings in which gasoline-operated vehicles are being repaired.

C. R. BURROUGHS
By direction

Copy to:
ACofS, SupplySvcs.
→ Base Fire Marshal



RJE

2d Marine Division, FMF
Camp Lejeune, North Carolina 28542

4/SHB/hea
4400
26 MAR 1970

From: Commanding General, 2d Marine Division, FMF
To: Commanding General, Marine Corps Base, 2d Marine
Division, FMF, Camp Lejeune, North Carolina 28542

Subj: Heating of Shop Spaces

Ref: (a) CG 2d MarDiv ltr 4/RJL/db of 26 Feb 70

1. Reference (a) contained a request that action be initiated to install adequate heating systems within division maintenance facilities. In connection therewith, this division obtained on temporary loan a portable type space heater, utilized by the Second Marine Air Wing, for the purpose of determining its effectiveness in heating shops spaces within the 1800 area. The results of this test indicate that the heater is an effective heating device and, if used in sufficient quantities, could provide adequate heat for the existing structures. Specifically, the model utilized is identified as Heater, Duct type, Portable 250,000 BTU, model, PH25, manufactured by the Hunter Manufacturing Company, Solon, Ohio, FSN 4520-752-9458. This item is listed in Federal Supply Catalogue #10-4520-201-20P at a cost of \$747.00. A preliminary survey indicates that approximately 44 such units would satisfactorily heat all shop spaces and maintenance facilities currently in use by the division.

2. The foregoing information is furnished for consideration inasmuch as it appears to offer a plausible solution to the heating problems experienced by this division at a cost considerably less than that which would be involved should more permanent facilities be installed.

L. V. CORBETT
Chief of Staff

RECEIVED
MAR 13 4 10 PM '70

RECEIVED
APR 13 4 10 PM '70

[Faint, illegible text, likely a letter or document body]



UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

4B/LD/awk
4700
14 Nov 1969

From: Commanding General
To: Commanding General, 2d Marine Division, FMF
Subj: Use of Ingersoll-Rand Heaters; authorization for
Ref: (a) CG, 2dMarDiv ltr 4/LLW/mjk 4700 of 24 Oct 1969
Encl: (1) Fire Safety Rules for Operation of Ingersoll-Rand Heaters (350,000 BTU)

1. As requested by reference (a), reconsideration has been given for use of subject heaters.
2. Authority is granted for the use of these heaters, provided they are installed and operated in strict conformance with enclosure (1). Supplementary instructions should be issued to operators to cover use of these heaters, hours of operation, etc.

FREDRIC O. OLSON
By direction

→ Copy to:
Base Fire Chief

UNITED STATES MARINE CORPS
MARINE CORPS CASE
CAMP LEONARD HOUSTON CAROLINA



DATE
BY

REPORT OF THE
OFFICER IN CHARGE
OF THE
DETACHMENT
ON THE
OPERATIONS OF THE
DETACHMENT

FOR THE
MONTH OF
1954

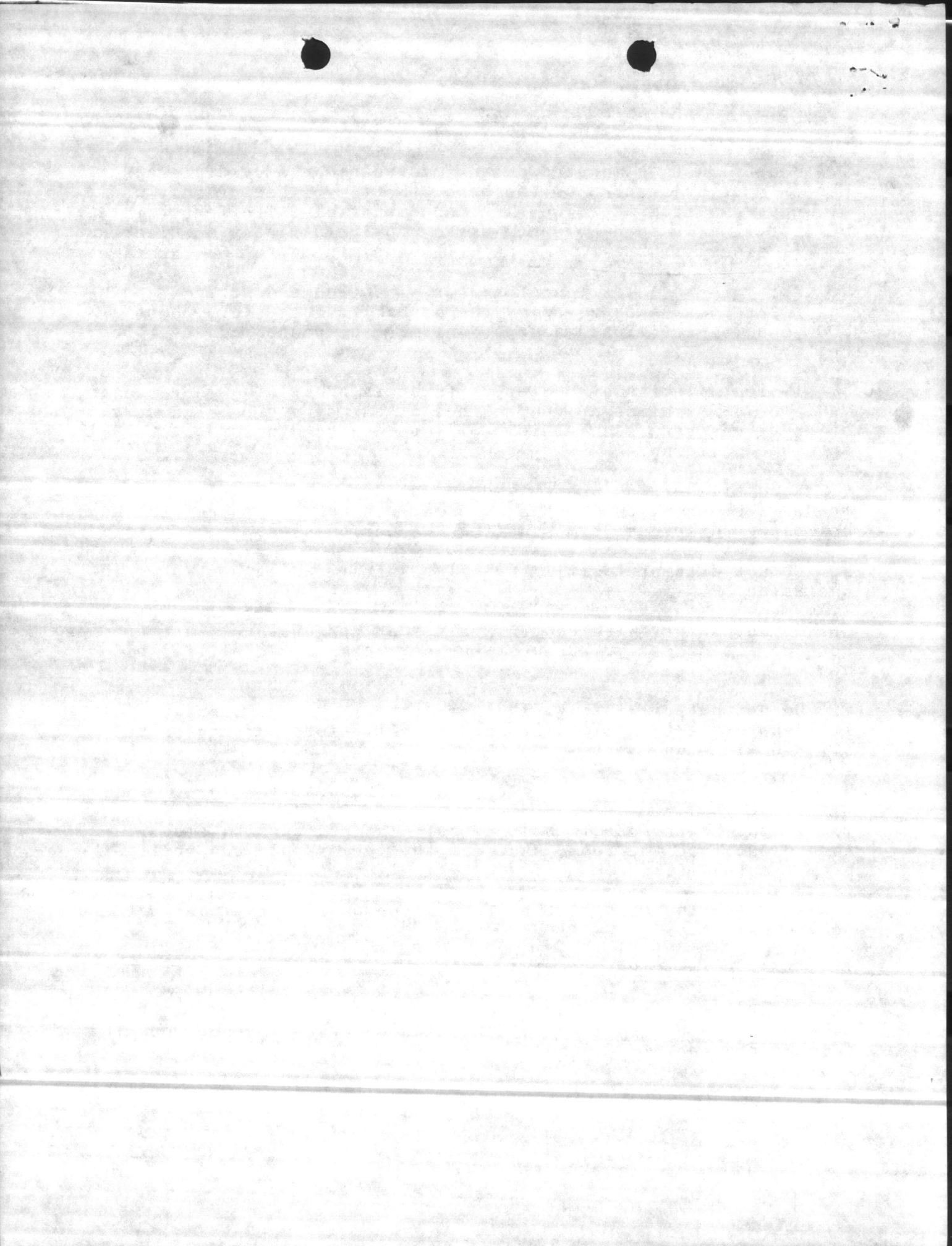
REPORT OF THE
OFFICER IN CHARGE

DATE
BY

13 Nov 1969

FIRE SAFETY RULES FOR THE OPERATION OF INGERSOLL-RAND HEATERS

1. Heater must be mounted on an immovable noncombustible base. Heater must be secured to the base. Bottom of heater must be at least 36" from the floor. A noncombustible wire fence will be installed in such a manner as to provide at least 5' clearance on all sides of heater. Fence will be a minimum of 5' in height.
2. Prior to installation of heater, location and wiring leading to heater must be approved by the Base Fire Inspector, phone 3004, and a certificate of approval must be posted adjacent to heater.
- ✓ 3. If installation of heater is to be in a building where motor vehicles or gasoline driven engines of any type are being serviced or repaired, each such vehicle will be degassed prior to entry into the building.
4. Each oil burning heater should be inspected by an authorized mechanic prior to the heating season. In addition, heaters should be inspected several times during the period used.
5. Do not attempt to fill the oil reservoir while heater is in operation.
6. Do not tamper with control valves or carburetor if heater does not operate properly. Request the services of a qualified oil heater mechanic.
7. Do not put oil into the heater after it has gone out and is still hot. Wait until it has cooled off before turning on the oil and lighting.
8. Do not allow the heater to burn unattended.
9. If the heater should become soot clogged, causing smoke to be forced out into the room, shut off the fuel supply and notify the proper authorities.
10. Know the location of the proper type of fire extinguisher and how to use it.
11. NOTIFY THE FIRE DEPARTMENT (3333) IMMEDIATELY IN EVENT OF FIRE.
12. CAUTION: Extreme care should be exercised when using this unvented type of appliance in an enclosed area. Carbon monoxide fumes are given off during its operation.



4B/LD/mkc
4700
14 Nov 1969

From: Commanding General
To: Distribution List

Subj: Use of Ingersoll-Rand heaters, portable, 350,000 BTU;
authorization for

Encl: (1) Fire Safety Rules for Operation of Ingersoll-Rand Heaters

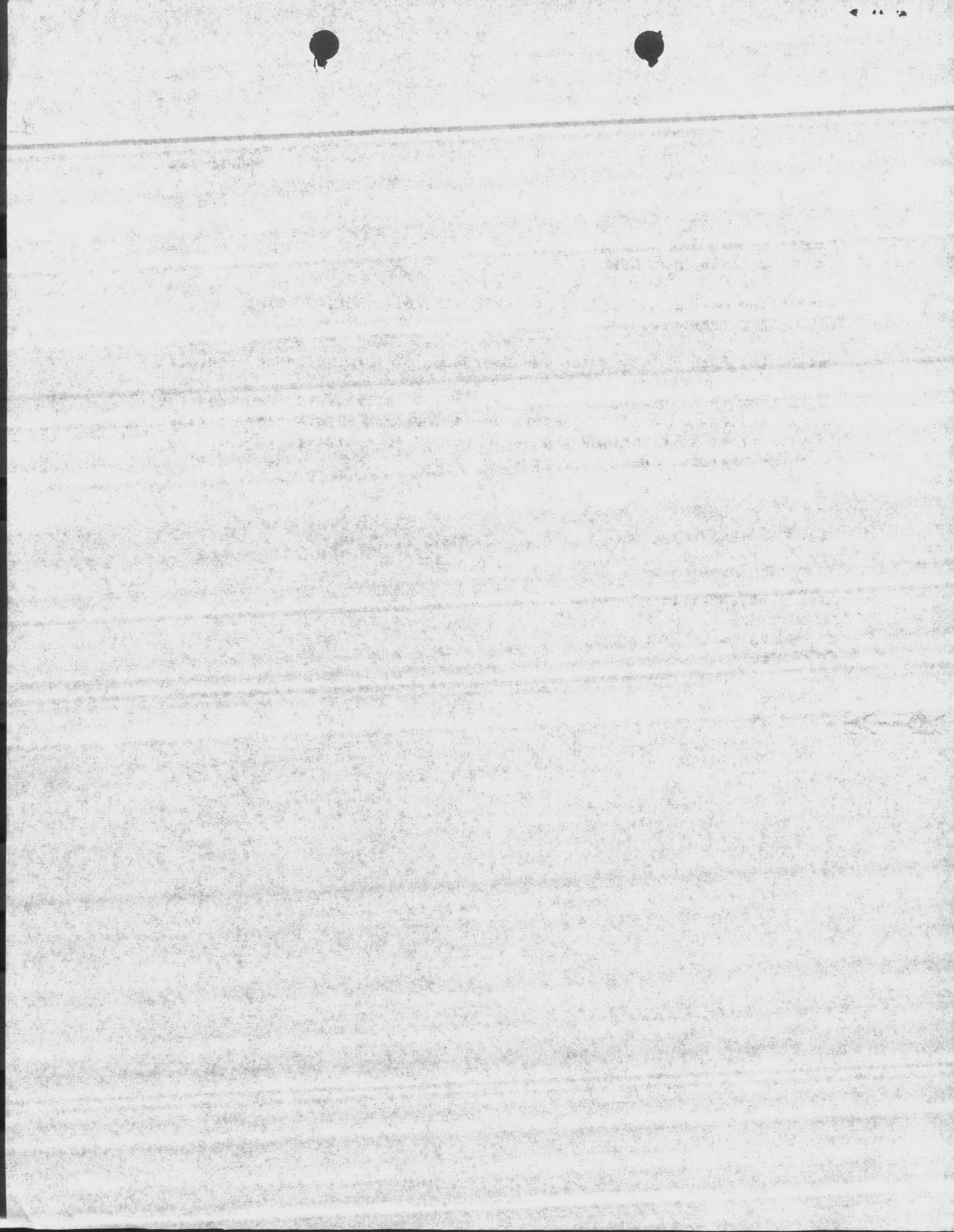
1. Authority is granted for the use of subject heaters, provided they are installed and operated in strict conformance with enclosure (1). Supplementary instructions should be issued to operators to cover use of these heaters, hours of operation, etc.

FREDRIC O. OLSON
By direction

Distribution List:
CO, 1st ITR
CO, MCSSS
CO, MCEB

Copy to:
Base Fire Chief





BASE FIRE DEPARTMENT
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

14A/CBW/vlw
5 Nov 1962

From: Chief Fire Inspector
To: Marine Corps Exchange Officer

Subj: Oil stoves in service station; use of

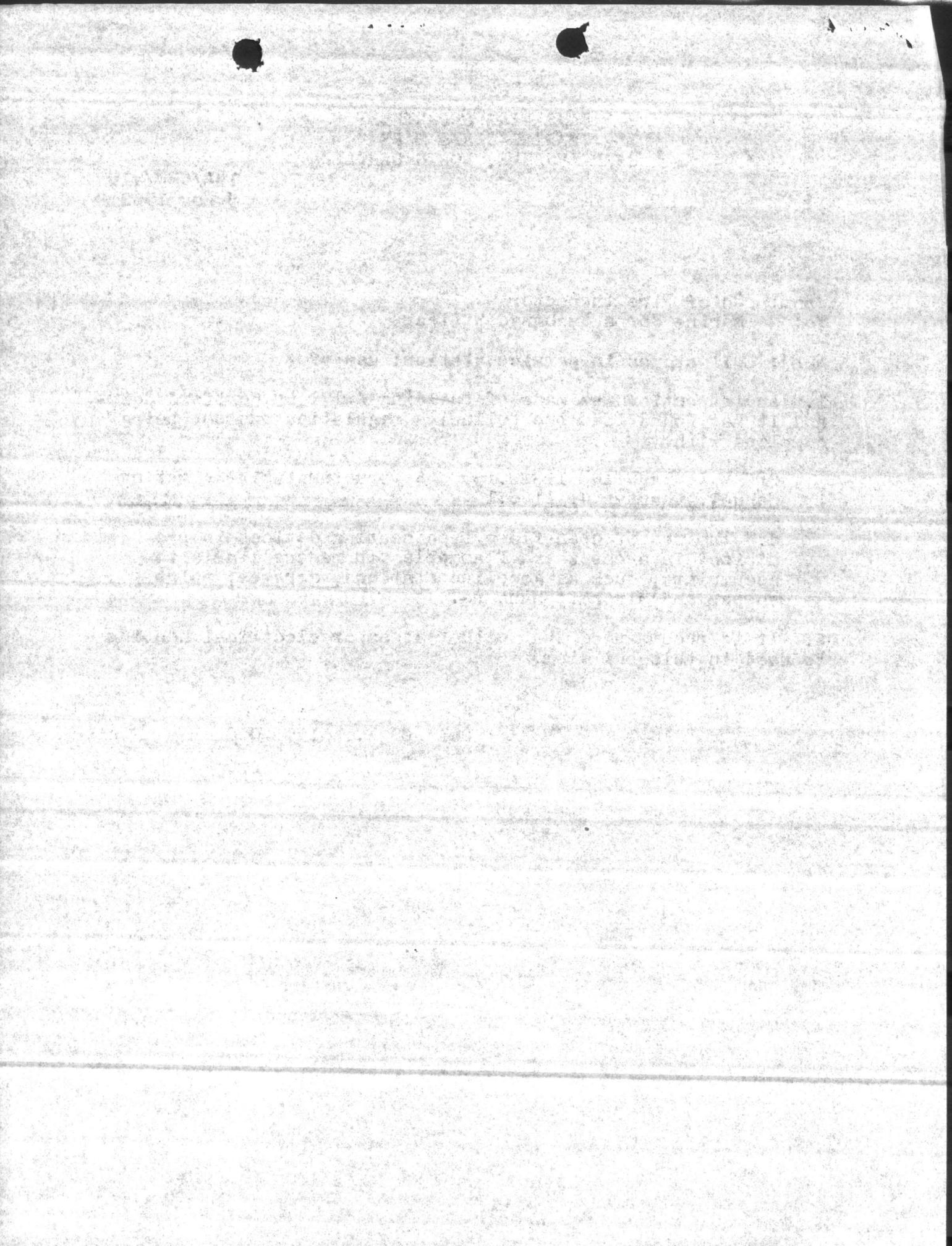
1. An inspection was made of Building ~~3111~~ ³¹ ~~at~~ ^{WALLACE CREEK Boat House} Montford Point, and it was found that the following regulation was not being complied with:

OPNAV INSTRUCTION 11320.15, USN Structural Fire-Fighting Manual, Chapter 4, 1106.1

d. The use of open flame type heating devices is prohibited in areas where flammable vapors are liable to accumulate, such as gasoline stations, garages, paint shops, and aircraft hangars.

2. It is recommended that either steam or electrical heating be used in this building.

CHARLES B. WHITTINGTON



JDW/wh
6 November 1962

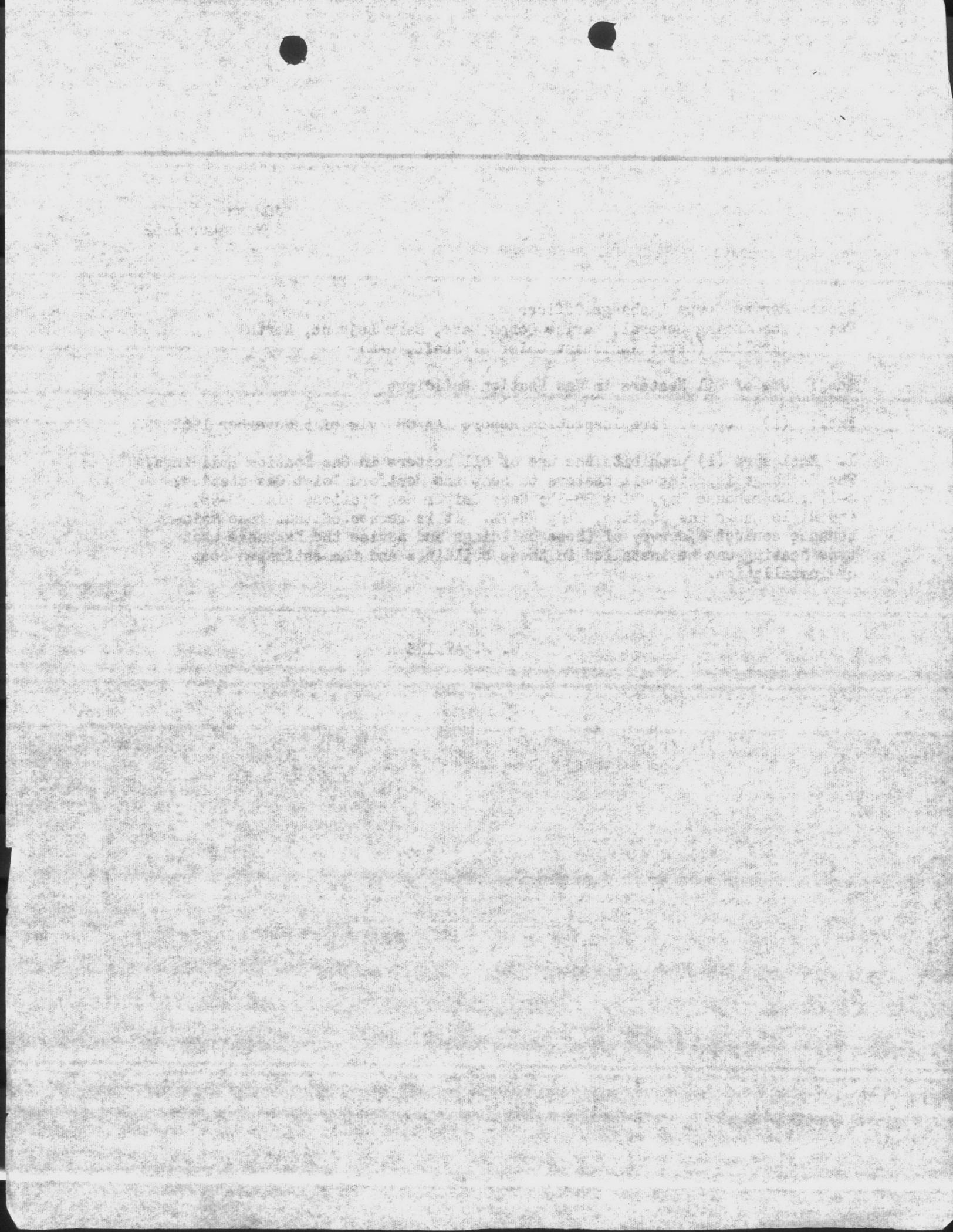
From: Marine Corps Exchange Officer
To: Commanding General, Marine Corps Base, Camp Lejeune, North
Carolina (Attn: Assistant Chief of Staff, G-4)

Subj: Use of Oil Heaters in Gas Station Buildings

Encl: (1) Copy of Fire Inspection Report 14A/CBW/vlw of 5 November 1962

1. Enclosure (1) prohibits the use of oil heaters in Gas Station Buildings. The Exchange is using oil heaters to heat the Montford Point Gas Station, M-171; Courthouse Bay, Bldg BB-36; Camp Geiger Gas Station, Bldg CG-98, and Rifle Range Gas Station, Bldg RR-72. It is requested that Base Maintenance conduct a survey of these buildings and advise the Exchange what type heating can be installed in these buildings and the estimated cost of installation.

W. W. ATKINS



HEADQUARTERS
8th Marines, 2d Marine Division, FMF
Camp Lejeune, North Carolina

FIRE CHIEF
WHITTINGTON

RB 11320
4/EFM/ecd
8 December 1959

REGIMENTAL BULLETIN 11320

Subj: Area #4 space heater inspection, result of:

Ref: (a) RO 11320.1B
(b) BO 11320.5
(c) BO 11370.1A

Encl: (1) General discrepancies
(2) Discrepancies by organization/units

1. Purpose. To promulgate the discrepancies on a space heater inspection of Area #4, and to require corrective action.

2. Information. On 4 December 1959, an inspection of all space heaters in Area #4 was held by Inspector Cordwell, of the CLNC Fire Department. Enclosure (1) and (2) list the discrepancies noted.

3. Action.

a. The results of this inspection show that organizational/unit commanders are not following the fire prevention program outlined in reference (a). Therefore, corrective action will be taken by the commanding officers of all organizations/units, operating in Area #4, to insure closer attention to reference (a) and to correct present discrepancies.

b. Report completion of corrective action, to the Commanding Officer, 8th Marines, (Attn: S-4).

4. Self-Cancellation. This bulletin is cancelled on 7 May, 1960.

W. S. Bartley

W. S. BARTLEY
Lieutenant Colonel, U.S. Marine Corps
Acting Commanding Officer

DISTRIBUTION: "B" Plus

CO, HQ BN, 2d MarDiv	(5) OIC, Div Clth Sales Bldg 434	(2)
CO, 2d Serv Bn	(3) OIC, DivComm Bldg's 442,443	(3)
CO, 2d Pion Bn	(5) OIC, Hobby Shop, Bldg 441	(2)
Div ISO, Bldg 401	(2) OIC, Regt Post Office Bld.438	(2)
OIC, Div Band, Bldg 426	(5) Fire Chief WHITTINGTON CLNC	
OIC, Div Dental Bldg 428	(2) Fire Department	(2)

GENERAL DISCREPENCIES

The general discrepancies found in the space heater inspection fall in the following categories:

1. Fire Extinguishers.

a. In ten (10) cases, CO2 fire extinguishers did not accompany space heaters in operation. (See ref. (b)). (Action: additional CO2 extinguishers will be drawn by units from Bldg. 1203 on 10 December 1959)

b. In a few cases, pump-type (H2O) fire extinguishers were not completely filled. (See ref. (b)).

2. Oil Tanks.

a. Some were missing covers.

b. A few were leaking fuel.

3. Space Heaters.

a. Some were dangerously close to combustible materials.

b. Some carburetors were clogged, damaged, and/or leaking fuel.

c. Four space heaters were condemned.

d. Flues.

(1) Some joints were not secured with screws.

(2) Some flues were too close to combustible materials.

(3) Some flues were improperly installed with coat hangers, etc.

(4) A few pipes were damaged and/or filled with soot.

4. Operation. The operating efficiency of the space heater was very low. This is undoubtedly due, primarily, to unauthorized adjustment of carburetors, and the use of improper fuel. It is believed that No. 2 fuel oil is being used instead of the prescribed No. 1.

5. Repairs. All repairs to space heaters will be done by Base Maintenance. (See ref (c)). Fire extinguishers (See ref. (b)).

UNITED STATES

Department of Justice
Federal Bureau of Investigation

Washington, D. C.
October 10, 1950

Mr. J. Edgar Hoover
Director, Federal Bureau of Investigation
Washington, D. C.

Dear Mr. Hoover:

Enclosed

are two copies of a report...

dated October 10, 1950...

for your information...

I am sure you will find this information of interest...

Very truly yours,

Special Agent in Charge

DISCREPANCIES BY ORGANIZATION/UNITS

Headquarters Company, 8th Marines

Bldg. No.

- 433 1. Needs one (1) CO2 fire extinguisher.
- 436 1. Flue isn't secured at joints with screws.
2. Second heater has a loose flue.
- 435 1. Carburator leaks fuel (was condemned).

1st Battalion, 8th Marines

- 439 1. Needs one (1) CO2 fire extinguisher
(Supply office).
2. Carburator leaks fuel, and flue improperly
connected (Chaplain's office).
3. Needs one (1) CO2 fire extinguisher (Armory).
- 438 1. Needs one (1) CO2 fire extinguisher (Post
Office).
2. Carburator leaks fuel (Sub-unit).
- 445 1. Needs one (1) CO2 fire extinguisher (Comm).
(Also, shouldn't use double socket connection
on the extension cord).

2d Battalion, 8th Marines

- 444 1. CO2 fire extinguisher should be secured to
the bulkhead.

2d Pioneer Battalion

- 402 1. Shouldn't have paint, oil and solvents in
the building, (Armory)
2. Heater too close to bulkhead. (Comm)
3. Broken glass in heater door. (Comm)
4. Flue isn't properly secured. (Comm)
5. Flue isn't properly connected. (Police shed)
6. Heater too close to combustibile materials.
- 432 1. Carburator should be repaired.
2. Needs one (1) CO2 fire extinguisher. ("C"Co.)
3. Heater too close to bulkhead. ("C"Co.)
4. Flue not connected at joints. (H&S Co.)
5. Needs one (1) CO2 fire extinguisher. ("B"Co.)
6. Flue not secured properly. ("B" Co.)

1. [Illegible text]

2. [Illegible text]

3. [Illegible text]

1000

4. [Illegible text]

1010

5. [Illegible text]

1020

6. [Illegible text]

7. [Illegible text]

1030

8. [Illegible text]

9. [Illegible text]

1040

10. [Illegible text]

11. [Illegible text]

12. [Illegible text]

13. [Illegible text]

14. [Illegible text]

1050

15. [Illegible text]

16. [Illegible text]

17. [Illegible text]

18. [Illegible text]

19. [Illegible text]

20. [Illegible text]

21. [Illegible text]

1060

22. [Illegible text]

23. [Illegible text]

24. [Illegible text]

25. [Illegible text]

26. [Illegible text]

27. [Illegible text]

28. [Illegible text]

29. [Illegible text]

30. [Illegible text]

31. [Illegible text]

32. [Illegible text]

Division Communications School

Bldg. No.

442

1. Flue not secured with screws.
2. Needs two (2) CO2 fire extinguishers. (Class room)
3. Heater doesn't operate properly. (Was condemned) (Class room).

Division Dental Storeroom

428

1. Heater doesn't operate properly. (Was condemned).

Division Hobby Shop

441

1. Heater doesn't operate properly. (Was condemned) (T.V. room).
2. Flue connections not secured.

Division Cash Sales

434

1. Needs one CO2 fire extinguisher.

Division of Public Health

- 1. Name of person
- 2. Address
- 3. (City)
- 4. Telephone
- 5. Occupation

li

Division of Health

3.

Division of Health

- 1. Name of person
- 2. Address
- 3. (City)
- 4. Telephone
- 5. Occupation

Division of Health

1.



INSTRUCTIONS

Minneapolis-Honeywell Regulator Company

MINNEAPOLIS 8, MINNESOTA • TORONTO 17, ONTARIO

**RA817C
PROTECTORELAY*
PRIMARY CONTROL**



GENERAL DESCRIPTION

The RA817C is a stack-mounted, interrupted-timed-ignition Protectorelay oil burner primary control. A fast-acting magnetic Pyrostat Assembly makes it particularly suitable on applications with slowly rising stack temperatures.

The Pyrostat contacts have been modified so that only one "hot" and one "cold" contact are used. This simplifies Pyrostat action and improves the sequence of operation on low-stack-temperature applications. The terminal board is flat so that the terminals are easily located and the terminal connections easily made. An integral transformer supplies the low voltage for the control circuit. The safety switch is ambient-temperature compensated so that changing temperatures do not affect its timing. Contacts are protected from stack-dirt and soot by a metal baffle and a Teflon seal-off disc in the element tube, and a dust shield on the back of the ignition timer. If the flame is not properly established when an attempt to start the

burner is made, the safety switch will "lock out" and the burner cannot be operated until the safety switch is manually reset. If the flame goes out during the burner running cycle, the Protectorelay will recycle (attempt to restart) after a scavenger period. If flame is re-established, normal operation will continue. If not, the Protectorelay will "lock out". If the power supply is interrupted, the relay will return to the starting position and operate through a complete starting cycle when power is restored.

SPECIFICATIONS

MODEL: RA817C Protectorelay primary control, for interrupted-timed-ignition oil burners.

VOLTAGE AND FREQUENCY: 115v, 60 cycle, standard. 230v, 60 cycle, 115v or 230v, 50 cycle available.

RATING IN AMPERES:

	Full Load†	Locked Rotor†
115v AC	7.4	44.4
230v AC	3.7	22.2

†Terminal 3 (motor)
Terminal 4 (ignition)—550 VA

SAFETY SWITCH TIMING: Approximately 90 seconds, non-adjustable.

IGNITION TIMING: Specify.
25-45 seconds, 60-90 seconds, 80-110 seconds.

CASE DIMENSIONS: 6" wide, 6" high, 3-3/8" deep.

ELEMENT INSERTION LENGTH: 2-1/2" to 5-1/4", adjustable.

*Trademark
December 15, 1959
Supersedes earlier issue
A. M.

THERMOSTAT HEATER DATA (60 cycles)

Thermostat Model Number	Color Code
T86A	Set 0.5
TM81, TM801	Black & Red
T81A, T823	Black & Green

MOUNTING: Mounting Flange furnished with Protectorelay.

ORDERING INFORMATION:

Specify—

1. Model number.
2. Voltage and frequency.
3. Ignition timing.

Order from—

1. Your usual source, or
2. Minneapolis-Honeywell Regulator Company
2753 Fourth Avenue South
Minneapolis 8, Minnesota
(In Canada—Honeywell Controls Limited
Vanderhoof Avenue, Leaside
Toronto 17, Ontario).

Order This Sheet **95-2473**
By Form Number

INSTALLATION

If special mounting provisions are supplied by the furnace, boiler, or burner manufacturer, follow their recommendations carefully. Where no special instructions are furnished, proceed as follows:

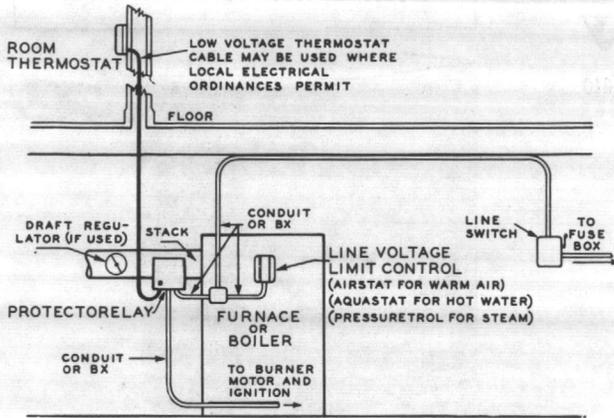


Fig. 1—Typical installation diagram.

MOUNTING:

The bimetal element should be in the direct path of the hot stack gases, between boiler or furnace and

draft regulator (if used), as near as possible to boiler or furnace (see Fig. 1). It must not, however, be placed where temperatures will exceed 1000 deg F. The Protectorelay should be installed with the element tube horizontal. (See "High Temperature Applications".)

If mounting in an elbow is necessary, the bimetal element should go between the center and the outside of the elbow where the hottest gases flow.

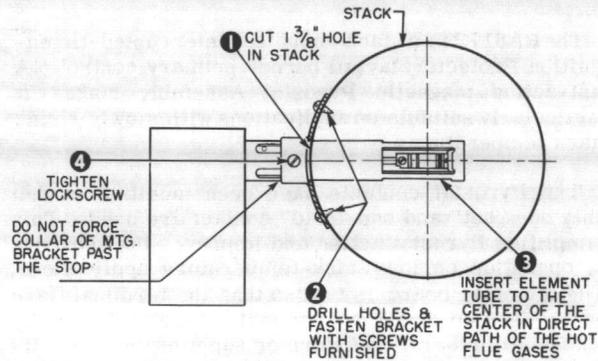


Fig. 2—Proper location and mounting of bimetal element.

WIRING

CAUTION:

All wiring must agree with applicable electrical codes, ordinances, and regulations in such matters as wire size, type of insulation, and enclosure.

Line voltage wiring must be number 14 or larger having insulation approved for the application, enclosed in an approved raceway or in BX cable. Standard thermostat cable may be used in the low voltage circuit between thermostat and Protectorelay if local regulations permit.

Figure 3 is a typical connection diagram for an interrupted ignition oil burner control system using the RA817C Protectorelay.

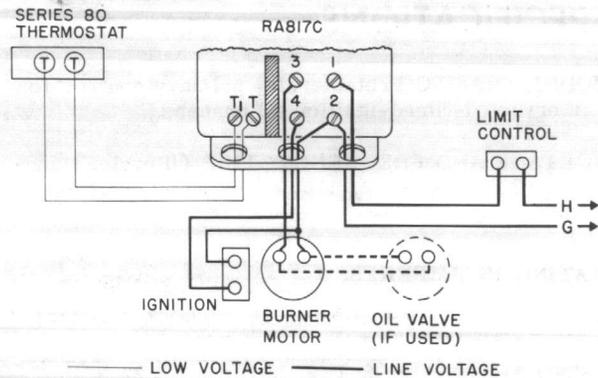


Fig. 3—Connection diagram.

TESTING AND ADJUSTING

It is very important that the Protectorelay be tested and adjusted in actual operation. Always test for safety shutdown by simulated flame failure before leaving the job.

TO START BURNER:

CAUTION: Be sure the combustion chamber is free of liquid oil or oil fumes.

1. Put the Pyrostat contacts in step by pulling forward the drive shaft (see Fig. 5) and releasing it slowly. Do not let it snap back.
2. Operate safety switch reset lever (see Fig. 4).
3. Open the hand valve in the oil supply line.
4. Set indicators on high limit control and thermostat at top of scale.

5. Close the line switch. Burner should start. The ignition comes on with the burner motor and is turned off at the expiration of the ignition "ON" period—see "Specifications, Ignition Timing".

6. While burner runs, watch clutch finger moving outward. It should engage the stop arm, and the drive shaft should thereafter continue moving a small but

definite amount. Its additional movement is very important for proper sequence operation.

NOTE: If clutch finger does not engage stop arm, the bimetal element is not getting enough heat, and a new location should be found where higher temperatures exist.

SCAVENGER PERIOD

7. Allow the burner to run a few minutes more, then open and immediately reclose the line switch. Burner should stop and should restart following the scavenger period, which is determined by the length of time required for flue temperature to decrease sufficiently for the Pyrostat cold contacts to close and the ignition proving contact to close. Check elapsed time between burner shut-down and the restart. This scavenger period should be at least 1 minute.

TO CHECK SAFETY SWITCH:

1. With burner running, close hand valve in oil supply line to simulate flame failure.

2. When flame goes out, the hot contact should open after a slight drop in stack temperature and stop the burner motor.

3. Not until the stack cools enough so that the cold contacts have made should the burner start up. Note the time.

4. With no oil for a flame, the burner should stop on safety shutdown in approximately 90 seconds (at rated line voltage).

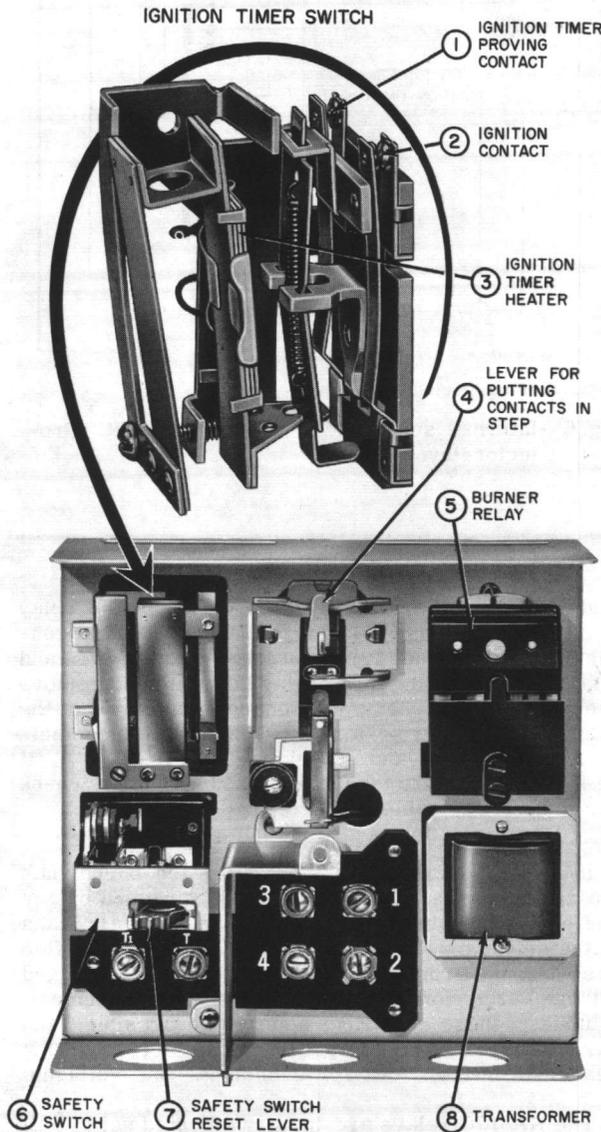


Fig. 4—RA817C with cover removed and with inset showing ignition timer switch detail.

OPERATION

With the Protectorelay wired to the burner system as shown in Fig. 3, the operation is as follows:

1. When heat is demanded, a circuit is made across T1 and T to energize the relay and safety switch heater.

2. The relay closes to make a holding circuit through the low-voltage contacts, and energizes the ignition timer heater. The line voltage contacts close to energize terminals 3 and 4.

3. When flame is established and stack temperature begins to rise, the Pyrostat hot contact closes, before

the Pyrostat cold contact opens, to hold in the relay.

4. Approximately 75 seconds after the start, the ignition heater opens the ignition switch and ignition proving contact to stop ignition. The normal running circuit is now completed.

5. When heat demand is satisfied, the T1-T circuit is opened, and the relay and ignition timer heater are de-energized. The line voltage contacts open to de-energize terminal 3.

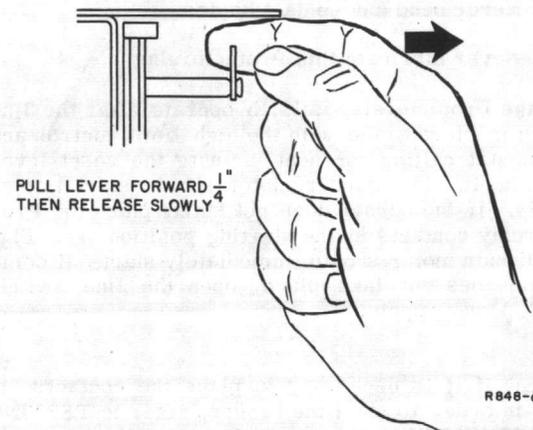


Fig. 5—Placing Pyrostat contacts "in step".

6. As stack temperature falls, the Pyrostat hot contact breaks before the Pyrostat cold contact makes to partially complete the starting circuit. However, the starting circuit cannot be made until the ignition timer heater cools enough to close the ignition proving contacts. The normal "off" circuit is now completed, and the Protectorelay is ready for the next call for heat.

IGNITION FAILURE—If flame is not established on a start, the safety switch heater remains energized through the cold contact until safety lockout occurs. The safety switch must be reset manually for another start.

FLAME FAILURE—If flame fails during the running cycle, the hot contact opens on the first drop in stack temperature. This drops out the relay, and de-energizes the burner motor and ignition timer heater. If heat is still demanded with the cold contact and ignition proving contact made, the Protectorelay will attempt to restart. If flame is re-established, the normal running cycle is resumed. If not, safety lockout occurs within the limits of safety switch timing.

POWER FAILURE—An interruption of power causes the Protectorelay to return to the starting position (see "Flame Failure" above).

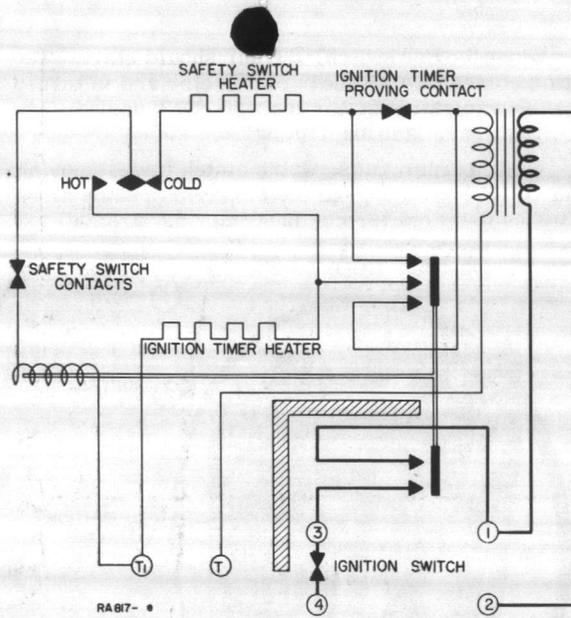


Fig. 6—Internal schematic circuit of RA817C Protectorelay.

MAINTENANCE

CAUTION:

1. Be sure the combustion chamber is free of liquid oil or oil fumes before resetting the safety switch.
2. Never bend any contact blades.
3. Never lubricate this Protectorelay.

If the Protectorelay fails to operate after the line switch is closed, and with the high limit control and thermostat calling for heat, actuate the reset lever (see Fig. 4). The burner motor should start immediately. If the burner does not start, place the Protectorelay contacts in the starting position (see Fig. 5). Burner motor should immediately start. If combustion does not take place, open the line switch. Check power supply.

NOTE: If it is necessary to place the contacts "in step" in order to start the burner, refer to **TESTING AND ADJUSTING** and carefully check the complete operating cycle as outlined.

If the burner motor does not start when the contacts are placed "in step", place a jumper across the T1

and T terminals of the Protectorelay. If the relay does not pull in (with current "on" and with cold contacts closed), the Protectorelay is defective and should be replaced. If the relay does pull in, remove the jumper and check all connections between the thermostat and Protectorelay. Examine the contacts of the thermostat and low-voltage limit control, if used, to make sure they are closed. Finally, check the low-voltage cable if necessary.

If the Protectorelay locks out after the burner has started up normally, the trouble may be caused by any one or more of the following: down drafts or air leaks in the smoke pipe, slow temperature rise of the flue gas where the Protectorelay element is located, plugged oil line, or accumulated soot on the bimetal element. If none of these conditions appears responsible, and particularly if safety lockout frequently occurs during peak load hours, look for subnormal line voltages.

The RA817C relays are factory adjusted not to pull in with line voltage below 78% of rated value (90v for 115v rating, 180v for 230v rating), thus guarding against ignition failure. A U. L. -approved ignition system should operate at 70% of rated voltage if burner and electrodes are properly adjusted.



MARINE CORPS EXCHANGE 5-1
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO:

1B/HJTE/mg

4404

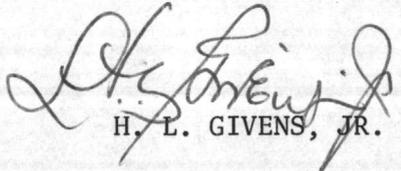
16 October 1967

From: Marine Corps Exchange Officer
To: Fire Chief, Marine Corps Base, Camp Lejeune, North Carolina

Subj: Installation of Gas Fired Clothes Dryers in Barracks.

1. Additional requests have been received for the installation of clothes dryers in barracks. Inasmuch as the electric power in the subject buildings is insufficient to operate an electric dryer and meet the other electric power requirements, it is desirable to install gas fired dryers.
2. Your concurrence in installing one gas fired dryer in each of the following buildings is requested:

102
104
108
112
1110
1109
1313
1314


H. L. GIVENS, JR.

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From: Marine Corps Exchange Officer
To: Marine Corps Exchange Officer
Subject: Installation of the first floor in barracks
1. Additional requests have been received for the installation of electric
dimmers in barracks. Attached as the electric power in the barracks
is insufficient to operate an electric dimmer and not the other
electric power requirements, it is desirable to install one first floor
2. Your concurrence in installing one first floor in each of the

102
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122
124
126
128
130

[Handwritten signature]
1. [unclear]
2. [unclear]

HEADQUARTERS
8th Marines, 2d Marine Division, FMF
Camp Lejeune, North Carolina

RB 11320
4/EFM/ecd
8 December 1959

REGIMENTAL BULLETIN 11320

Subj: Area #4 space heater inspection, result of:

Ref: (a) RO 11320.1B
(b) BO 11320.5
(c) BO 11370.1A

Encl: (1) General discrepancies
(2) Discrepancies by organization/units

1. Purpose. To promulgate the discrepancies on a space heater inspection of Area #4, and to require corrective action.

2. Information. On 4 December 1959, an inspection of all space heaters in Area #4 was held by Inspector Cordwell, of the CLNC Fire Department. Enclosure (1) and (2) list the discrepancies noted.

3. Action.

a. The results of this inspection show that organizational/unit commanders are not following the fire prevention program outlined in reference (a). Therefore, corrective action will be taken by the commanding officers of all organizations/units, operating in Area #4, to insure closer attention to reference (a) and to correct present discrepancies.

b. Report completion of corrective action, to the Commanding Officer, 8th Marines, (Attn: S-4).

4. Self-Cancellation. This bulletin is cancelled on 7 May, 1960.


W. S. BARTLEY

Lieutenant Colonel, U.S. Marine Corps
Acting Commanding Officer

DISTRIBUTION: "B" Plus

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OIC, Div Dental Bldg 428	(2) Fire Department	(2)

AD 1950
1950
DECEMBER 1950

REGIMENTAL BULLETIN 1950

1. The purpose of this bulletin is to provide information to the members of the Regiment regarding the activities of the Regiment during the year 1950.

2. The activities of the Regiment during the year 1950 were as follows:

1. The Regiment participated in the annual training exercises held at Camp ...
2. The Regiment participated in the annual training exercises held at Camp ...
3. The Regiment participated in the annual training exercises held at Camp ...

3. The results of the training exercises were as follows:

The Regiment performed well during the training exercises and was commended for its excellent performance.

4. The Regiment will continue to participate in training exercises during the year 1951.

5. The Regiment will continue to participate in training exercises during the year 1951.

6. The Regiment will continue to participate in training exercises during the year 1951.

GENERAL DISCREPENCIES

The general discrepancies found in the space heater inspection fall in the following categories:

1. Fire Extinguishers.

a. In ten (10) cases, CO2 fire extinguishers did not accompany space heaters in operation. (See ref. (b)). (Action: additional CO2 extinguishers will be drawn by units from Bldg. 1203 on 10 December 1959)

b. In a few cases, pump-type (H2O) fire extinguishers were not completely filled. (See ref. (b)).

2. Oil Tanks.

a. Some were missing covers.

b. A few were leaking fuel.

3. Space Heaters.

a. Some were dangerously close to combustible materials.

b. Some carburetors were clogged, damaged, and/or leaking fuel.

c. Four space heaters were condemned.

d. Flues.

(1) Some joints were not secured with screws.

(2) Some flues were too close to combustible materials.

(3) Some flues were improperly installed with coat hangers, etc.

(4) A few pipes were damaged and/or filled with soot.

4. Operation. The operating efficiency of the space heater was very low. This is undoubtedly due, primarily, to unauthorized adjustment of carburetors, and the use of improper fuel. It is believed that No. 2 fuel oil is being used instead of the prescribed No. 1.

5. Repairs. All repairs to space heaters will be done by Base Maintenance. (See ref (c)). Fire extinguishers (See ref. (b)).

MEMORANDUM

TO: THE DIRECTOR, BUREAU OF RESEARCH

FROM: [Name]

Subject: [Topic]

[Detailed description of the subject matter]

Reference is made to [Document]

[Additional reference]

to be

[Text block]

DISCREPANCIES BY ORGANIZATION/UNITS

Headquarters Company, 8th Marines

Bldg. No.

- 433 1. Needs one (1) CO2 fire extinguisher.
- 436 1. Flue isn't secured at joints with screws.
2. Second heater has a loose flue.
- 435 1. Carburetor leaks fuel (was condemned).

1st Battalion, 8th Marines

- 439 1. Needs one (1) CO2 fire extinguisher (Supply office).
2. Carburetor leaks fuel, and flue improperly connected (Chaplain's office).
3. Needs one (1) CO2 fire extinguisher (Armory).
- 438 1. Needs one (1) CO2 fire extinguisher (Post Office).
2. Carburetor leaks fuel (Sub-unit).
- 445 1. Needs one (1) CO2 fire extinguisher (Comm). (Also, shouldn't use double socket connection on the extension cord).

2d Battalion, 8th Marines

- 444 1. CO2 fire extinguisher should be secured to the bulkhead.

2d Pioneer Battalion

- 402 1. Shouldn't have paint, oil and solvents in the building, (Armory)
2. Heater too close to bulkhead. (Comm)
3. Broken glass in heater door. (Comm)
4. Flue isn't properly secured. (Comm)
5. Flue isn't properly connected. (Police shed)
6. Heater too close to combustible materials.
- 432 1. Carburetor should be repaired.
2. Needs one (1) CO2 fire extinguisher. ("C" Co.)
3. Heater too close to bulkhead. ("C" Co.)
4. Flue not connected at joints. (H&S Co.)
5. Needs one (1) CO2 fire extinguisher. ("B" Co.)
6. Flue not secured properly. ("B" Co.)

1. [Illegible text]

2. [Illegible text]

3. [Illegible text]

4. [Illegible text]

5. [Illegible text]

6. [Illegible text]

7. [Illegible text]

8. [Illegible text]

9. [Illegible text]

10. [Illegible text]

11. [Illegible text]

12. [Illegible text]

13. [Illegible text]

14. [Illegible text]

15. [Illegible text]

16. [Illegible text]

17. [Illegible text]

18. [Illegible text]

19. [Illegible text]

20. [Illegible text]

Division Communications School

Bldg. No.

442

1. Flue not secured with screws.
2. Needs two (2) CO2 fire extinguishers. (Class room)
3. Heater doesn't operate properly. (Was condemned) (Class room).

Division Dental Storeroom

428

1. Heater doesn't operate properly. (Was condemned).

Division Hobby Shop

441

1. Heater doesn't operate properly. (Was condemned) (T.V. room).
2. Flue connections not secured.

Division Cash Sales

434

1. Needs one CO2 fire extinguisher.

10012 - 10013 - 10014 - 10015

.c .abf

10012 10013 10014 10015

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To - Chief Whittington from Sta 8

HEADQUARTERS
2d Reconnaissance Battalion
2d Marine Division, FMF
Camp Lejeune, N. C.

4:EFN:amm
1010
4 October 1965

Fire Marshalls' Inspection of Space Heaters, 4 October 1965

Inspector: Mr Cardwell

Bldg 255 H&S Company Communications Room

1. Stove pipe needs cleaning
2. Needs new door knob

Supply Office

1. Stove pipe needs cleaning

Motor Transport

1. Stoves need installing
2. Need stove pipe
3. Needs metal on over head for stove pipe

All companies communications rooms need stove pipe and stoves installed

Recommended that stoves not be installed in working of Motor Transport due to the use of combustibile material, i. e. gasoline and cleaning fluid.

Bldg 211

Stove #1

1. Needs stove pipe
2. Needs oil tank cover

Stove #2

1. Needs oil tank cover
2. Needs stove pipe secured

Stove #3

1. Needs oil tank cover

Stove #4

1. Needs oil tank installed
2. Needs oil tank cover

Bldg 212

Stove #1

1. Needs stove pipe
2. Needs oil tank installed
3. Needs door Knob

Stove #2

1. Needs stove pipe secured
2. Needs oil tank cover

To: [Handwritten name]

10/10/58

Dear Sir,

I have the pleasure to inform you that your order for [illegible] has been received and is being processed.

The goods will be ready for delivery by [illegible] date.

Yours faithfully,

[Signature]

[Name]

[Address]

[Additional address details]

[Text]

Stove #3 Needs Oil tank cover

1. Needs Oil tank cover
2. Needs stove pipe & elbow
3. Needs door handles

Stove #4

1. Needs oil tank cover
2. Needs new elbow

Bldg 213

Stove #1

1. Stove pipe needs repair
2. Oil tank needs repair

Stove #2

1. Stove pipe needs repair

Stove #3

1. Oil tank needs repair
2. Stove pipe needed
3. Needs metal piece on buldhead
4. Stove to be placed a minimum of 18 inches from buldhead

Bldg 214

Stove #1, Stove #2, Stove #3

1. Pipes & stove needs cleaning
2. Pipes & stove needs cleaning
3. Stoves need balancing

Bldg 217

Stove #1

1. Needs cleaning
2. Secure stove pipe

Bldg 216

Stove #1

1. Door needs handle

Stove #2

1. Stove pipe needs to be secured & cleaned

Stove #3

1. Stove pipe needs cleaning

Bldg 215

Stove #1

1. Needs heat unit door and cabinet door
2. 2 doors need repairing
3. Stove pipe needs repairing

1. Above the level of the
2. level of the tank
3. level of the water
4. level of the air

1. Level of the air
2. Level of the water
3. Level of the tank
4. Level of the level

Fig. 1

1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

Fig. 2

1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

Fig. 3

1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

Fig. 4

1. Level of the water
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1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

1. Level of the water
2. Level of the air
3. Level of the tank
4. Level of the level

Stove #2

1. Stove Pipe needs securing

Stove #3

1. Need stove pipe
2. Cover missing from oil tank

Bldg 220

Stove #1

1. Needs stove pipe
2. Needs door handle
3. Stove pipe going through combustible material

Stove #2

1. Stove pipe needs to be secured
2. Cover missing from oil tank

Stove #3

1. Needs stove pipe
2. Needs cleaning
3. Needs new elbow and draft pipe

Stove #4

1. Needs oil tank
2. Needs stove pipe

Bldg 221

Stove #1

1. Needs new stove pipe
2. Needs top on fuel tank

Stove #2

1. Needs new stove pipe & elbow
2. Needs cover on fuel tank

Stove #3

1. Needs cover on fuel tank
2. Needs door handle

Stove #4

1. Needs stove pipe
2. Needs cover on fuel tank

Bldg 222

Stove #1

1. Repair stove pipe and clean
2. Needs top on fuel tank

Stove #2

1. Repair Stove pipe and clean

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Page 14
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Stove #3
1. Needs door handle

Stove #4
1. Needs door handle

Bldg 228

Stove #1
1. Good Condition

Stove #2
1. Needs pipe

Stove #3
1. Good Condition

Stove #4
1. Inside needs cleaning

Bldg 227

Stove #1
1. Stove pipe needs to be secured

Stove #2
1. Pipe needs cleaning
2. Needs cover on oil tanks
3. Handles on door

Stove #3
1. Needs new elbow

Stove #4
1. Needs new pipe

Bldg 226

Stove #1
1. Needs new fuel tank
2. Stove pipe needs cleaning

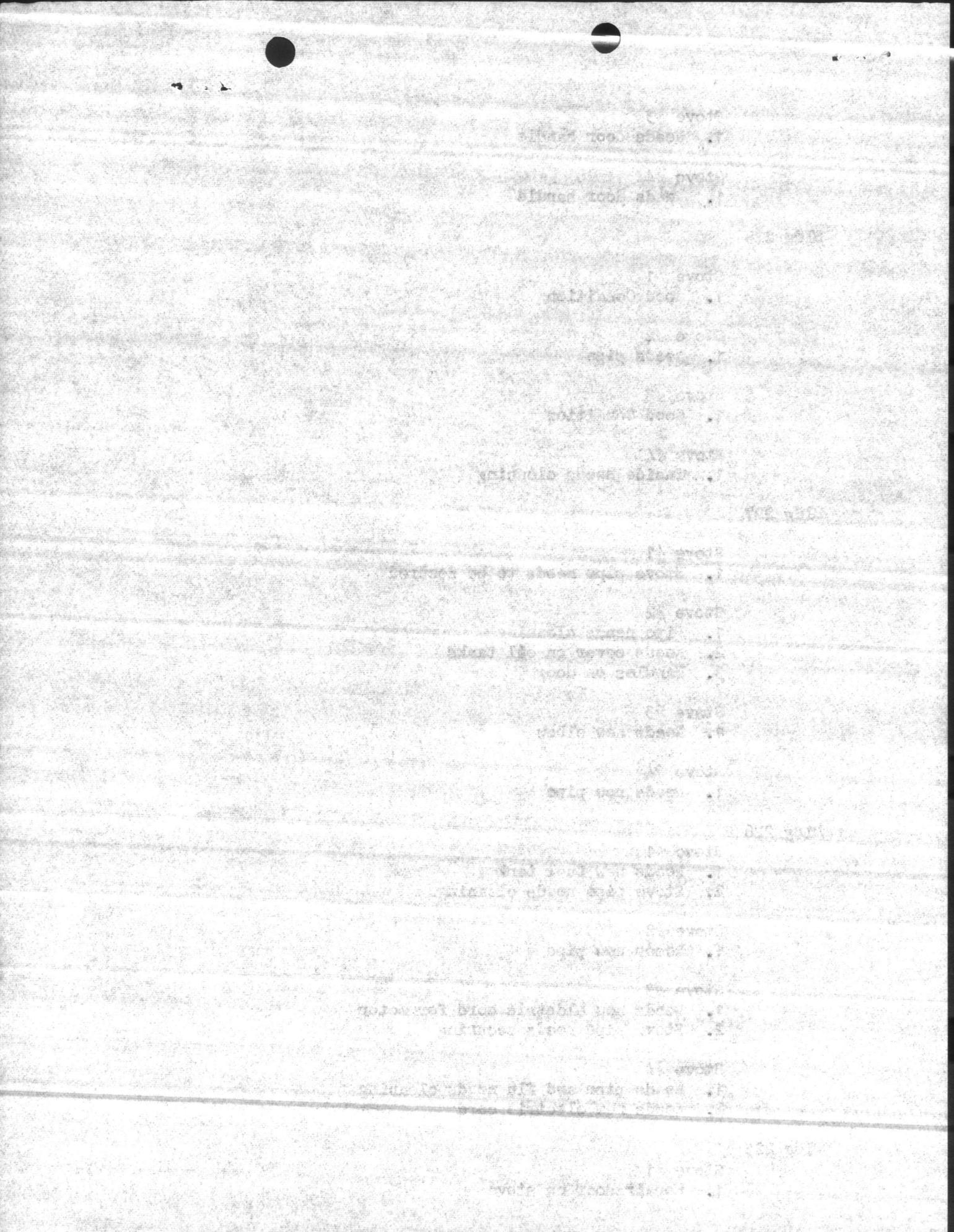
Stove #2
1. Needs new pipe

Stove #3
1. Needs new electric cord for motor
2. Stove pipe needs securing

Stove #4
1. Needs pipe and flu needs cleaning
2. Needs new electric cord

Bldg 225

Stove #1
1. Repair door on stove



Stove #2

1. Clean inside of stove

Stove #3

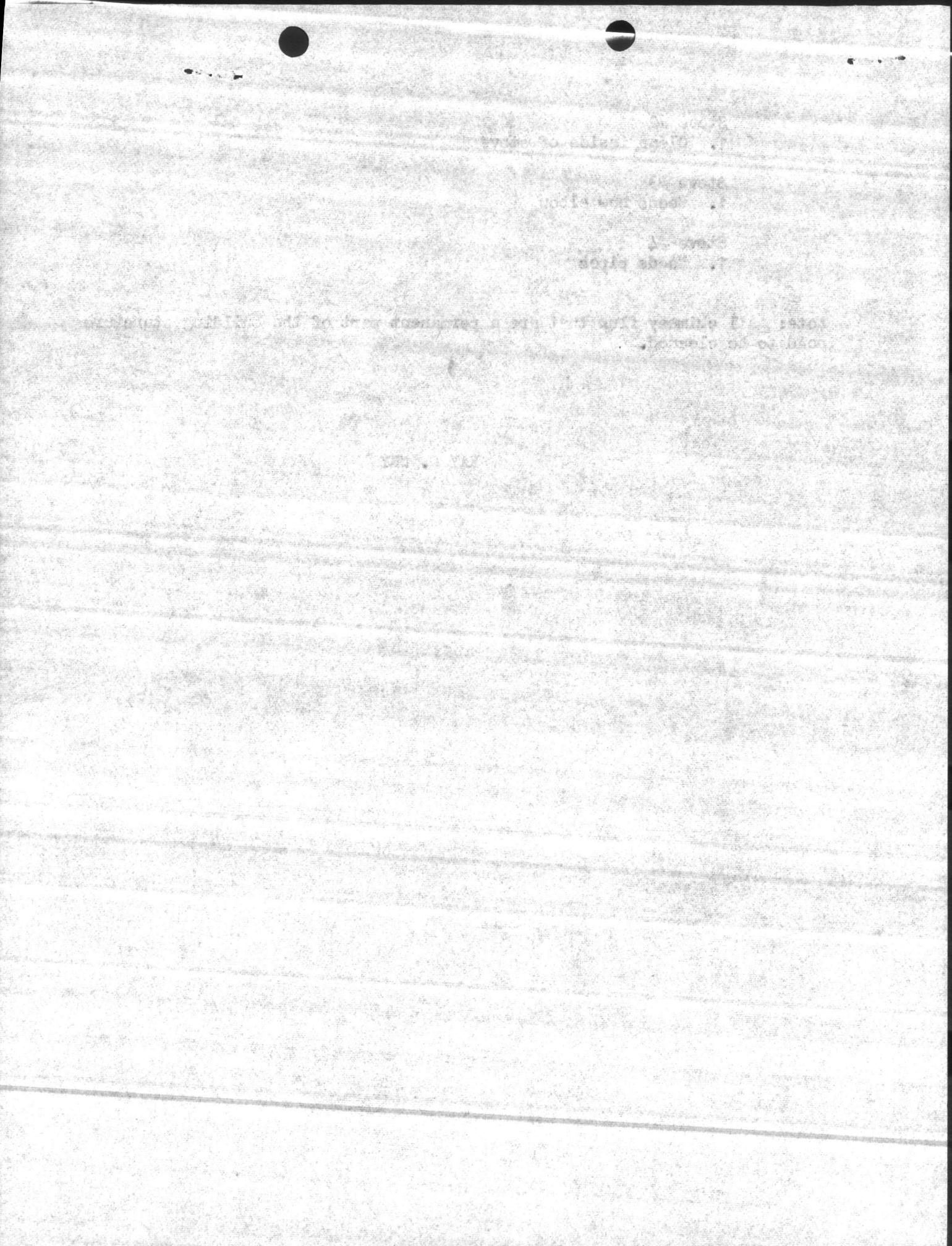
1. Needs new elbow

Stove #4

1. Needs pipes

Note: All chimney flues that are a permanent part of the building structure need to be cleaned.

RAY F. NEY



1B/HJTE/mg
4404
19 October 1967

From: Marine Corps Exchange Officer
To: Safety Director, Marine Corps Base, Camp Lejeune, North Carolina

Subj: Installation of Gas Fired Clothes Dryers in Barracks

1. Additional requests have been received for the installation of clothes dryers in barracks. Inasmuch as the electric power in the subject buildings is insufficient to operate an electric dryer and meet the other electric power requirements, it is desirable to install gas fired dryers.

2. Your concurrence in installing one gas fired dryer in each of the following buildings is requested:

53
502
506
510
514

H. L. GIVENS, JR.

→ Copy to:
Fire Chief, MCB

FOUR STAR

ONION SKIN

SOUTH/NORTH CO. U.S.A.

25% COTTON FIBRE

1/17/54
1954
19 October 1954

From: Major General [Name], [Address]
To: [Name], [Address]

Subject: Installation of Gas Filled Glass Pyrex in Barracks

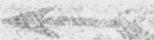
1. Additional requirements have been received for the installation of glass pyrex in barracks. Inasmuch as the pyrex cover in the subject buildings is insufficient to operate an electric stove and most the other electric power requirements, it is essential to install gas filled pyrex.

2. Your cooperation in installing one gas filled stove in each of the following buildings is requested.

20
200
200
210

W. J. CIVILIAN JR.

Copy to
[Name]



FOUR STAR

OMEGA SKIN

SOUTH BAPTIST CHURCH

25% COTTON FIBER

INSTRUCTIONS FOR OPERATING GAS HEATERS

1. Remove the small panel on the side of the heater.
2. Turn the rear control knob to the "PILOT" position. Place a lighted match through the panel opening under the burner and press the pilot knob down. Continue holding the knob down for approximately 30 seconds after burner lights.
3. After you release the pilot knob, if the burner does not continue to burn, repeat step 2. If it continues to burn turn the pilot knob to "ON".
4. Turn the front (numbered) control knob to the desired temperature. Normally when it is set on No. 5, it will maintain a comfortable temperature. The By-pass lever located between the control knobs should always be "OFF".
5. The heater blower operates automatically by thermostat and the switch should be turned on at all times.
6. To turn the heater off, turn both control knobs to "OFF".
7. Periodically you should lift the grill on top of the heater and clean all lint and trash out. You should, also, clean underneath and around the bottom of the heater occasionally.

INSTRUCTIONS FOR OPERATING OIL HEATER

1. DO NOT LIGHT HOT BURNER.
2. Set oil control knob on HIGH.
3. Allow a few minutes for oil to flow from tank into burner.
4. Light by dropping a lighted match into the burner, making sure it reaches bottom of burner.
5. After heater has burned a few minutes, turn control knob to desired temperature.
6. When starting fire, if burner is allowed to become flooded a pool of oil forms in bottom of burner. Set valve at "LOW" until pool burns out.
7. Do not leave the heater unattended after it is first lighted. For at least fifteen minutes, watch the flame and adjust it so that it does not smoke because as the heater warms up, its flame often increases.
8. To turn heater off, turn control knob to "OFF".
9. Keep outside of heater clean and free from dirt at all times.

1. Before the start of the test, the engine should be started and allowed to run for a few minutes to reach normal operating temperature. The oil pressure should be checked and adjusted if necessary. The engine should be run at the test speed for a few minutes before the test is started.

2. The test is started by pulling the starter handle. The engine should be run at the test speed for a few minutes before the test is started. The oil pressure should be checked and adjusted if necessary. The engine should be run at the test speed for a few minutes before the test is started.

3. The test is started by pulling the starter handle. The engine should be run at the test speed for a few minutes before the test is started. The oil pressure should be checked and adjusted if necessary. The engine should be run at the test speed for a few minutes before the test is started.

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8. The test is started by pulling the starter handle. The engine should be run at the test speed for a few minutes before the test is started. The oil pressure should be checked and adjusted if necessary. The engine should be run at the test speed for a few minutes before the test is started.

9. The test is started by pulling the starter handle. The engine should be run at the test speed for a few minutes before the test is started. The oil pressure should be checked and adjusted if necessary. The engine should be run at the test speed for a few minutes before the test is started.

10. The test is started by pulling the starter handle. The engine should be run at the test speed for a few minutes before the test is started. The oil pressure should be checked and adjusted if necessary. The engine should be run at the test speed for a few minutes before the test is started.

Inspector's Copy

BASE FIRE DEPARTMENT
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

27/CBW/mws
22 January 1969

From: Chief Fire Inspector
To: Assistant Chief of Staff, Facilities, Marine Corps Base,
Camp Lejeune, North Carolina

Subj: Ingersoll-Rand heaters; inspection and location of

Ref: (a) Para 2111, Vol 9, National Fire Code

Encl: (1) Listing denoting location of Ingersoll-Rand heaters

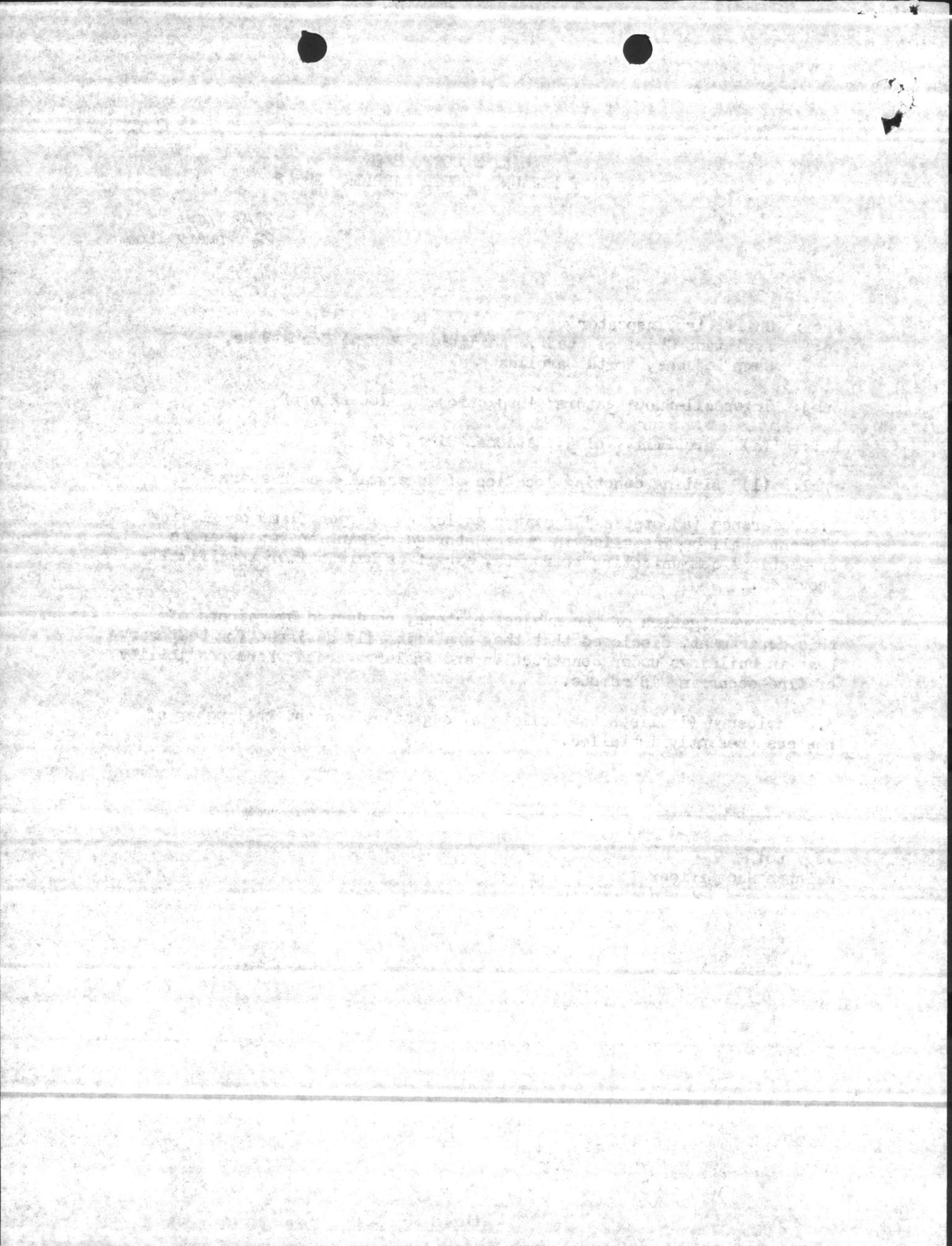
1. Reference (a) states "No heater employing an open flame or glowing element shall be installed in garage storage parking or repair areas or sections communicating therewith, except as hereinafter specifically provided."

2. An investigation of the subject heaters, conducted by members of this department, disclosed that they are primarily designed for temporary heat in buildings under construction and in large areas where possibility of fire occurring is remote.

3. Enclosure (1) lists the buildings, organizations and the number of heaters presently installed.

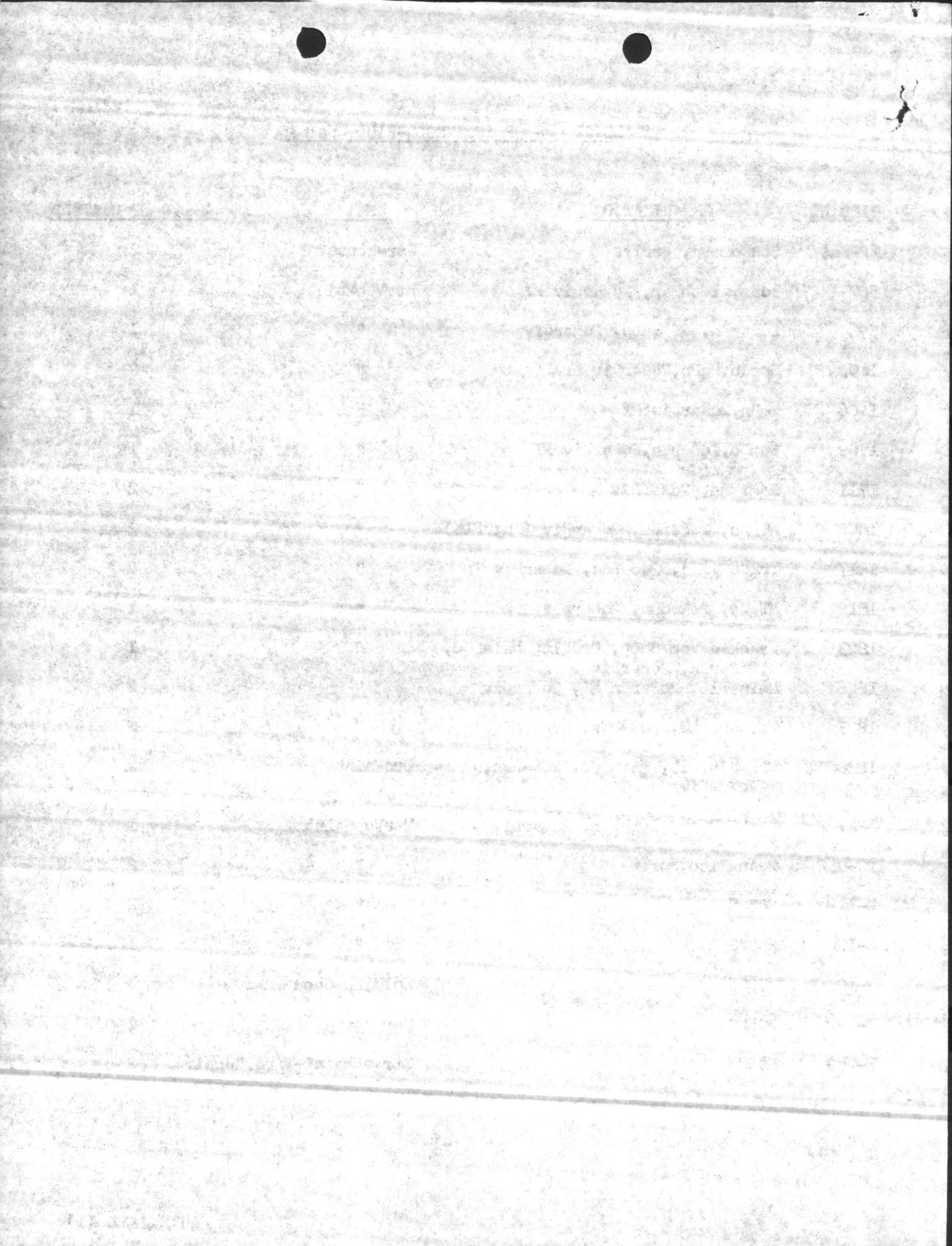
C. B. WHITTINGTON

Copy to:
Maintenance Officer

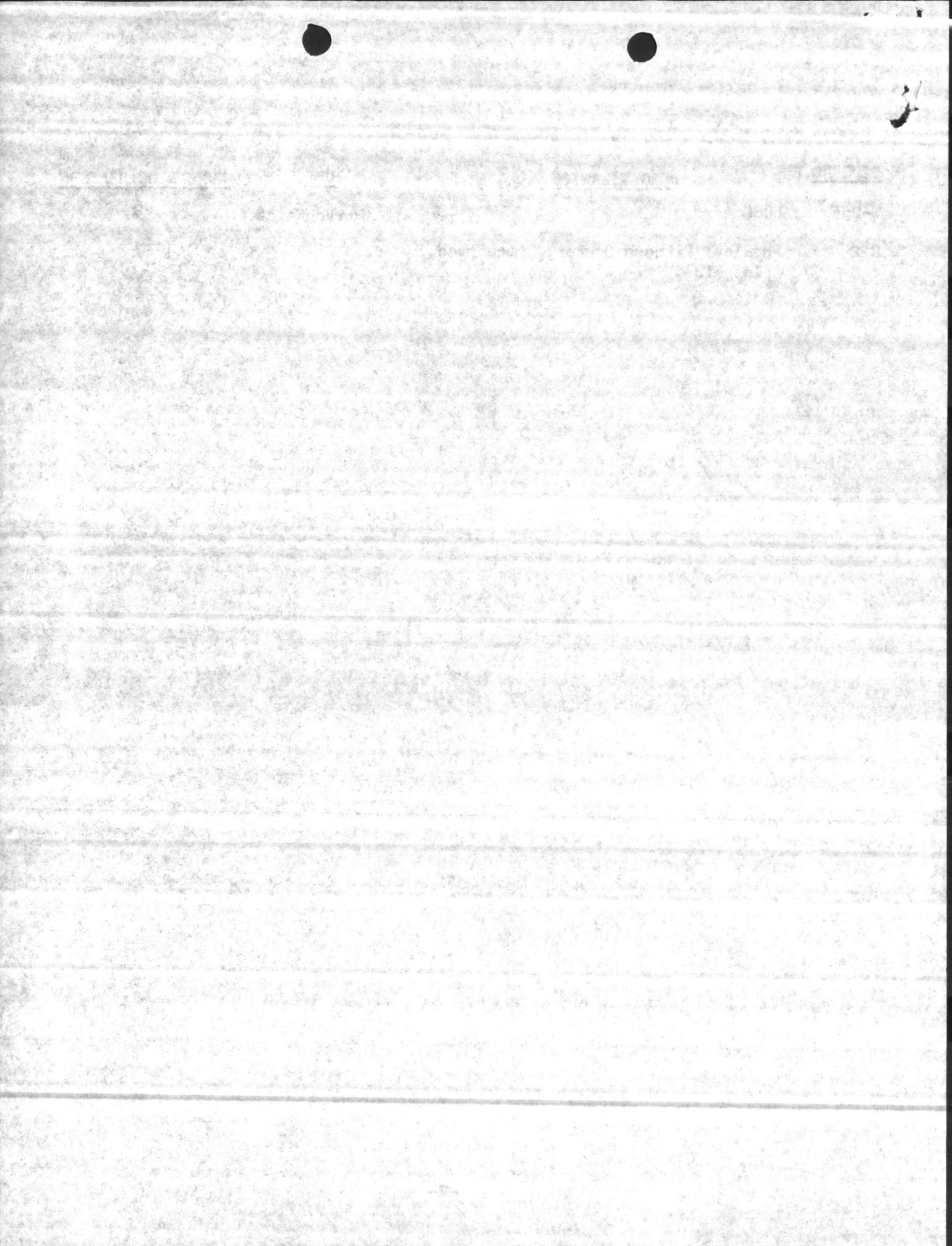


LOCATIONS OF INGERSOLL-RAND HEATERS

<u>BLDG NO.</u>	<u>ORGANIZATION</u>	<u>USE</u>	<u>NUMBER OF HEATERS</u>
TP-449	8thCommBn, ForTrs	Warehouse	2
567	3dBn, 10thMar, 2dMarDiv MT	MtrVehMaint	1
598	2dSerBn, MT Shop, 2dMarDiv	"	1
1405	SerCo, HqBn, 2dMarDiv MT	"	2
1406	HqBn, 2dMarDiv MT	"	1
1709	SupCo, 2dSerBn, 2dMarDiv MT	"	1
1711	2dMT Bn, 2dMarDiv	"	2
1808	MT Co, 2dSerBn, 2dMarDiv (EngrPlt)	"	2
1817	TrkCo (MT), 2dSerBn, 2dMarDiv	"	2
1819	MT Co, 2dMedBn, 2dMarDiv	"	1
1823	Tracked Veh Shop, OrdPlt, MaintCo, 2dSerBn, 2dMarDiv	"	1
1826	MaintPlt, 2dSerBn MT, 2dMarDiv	"	2
1827	MaintCo MT, 2dSerBn, 2dMarDiv	"	2
1828	OrdMaintPlt, MaintCo, 2dSerBn, 2dMarDiv	OrdMaint	2
1841	RegtHqBtry, 10thMar, 2dMarDiv	MtrVehMaint	1
TC-952	2dAnglico, ForTrs	"	2
M-119	MCSSS	"	2
M-120	MCSSS	"	1
M-121	MCSSS	Welding Shop	1
M-122	MCSSS	Warehouse	1
M-203	MCSSS	MtrVehMaint-Tire Repair	2



<u>BLDG NO.</u>	<u>ORGANIZATION</u>	<u>USE</u>	<u>NUMBER OF HEATERS</u>
M-255	MCSS	MtrVehMaint	3
822	Physical Fitness Center, SpecServes, 1st ITR		1



Reinsp & Location of heaters

B

Buildings Where Ingersoll-Rand Company Heaters are Located.

USE

567	10th Mar Reg. Truck Co
1817	2nd Ser Bn Truck Co (2)
598	2nd Ser Bn, Maint Co MT
1808	2nd Ser Bn, Eng. Maint. (2)
1819	2nd Med. Bn, 2d Mar Div
1841	10th Mar Reg. HqBat
1826	2nd Ser Bn, Maint Co. (2)
1827	2nd Ser Bn, Maint Co. MT (2)
1406	8th Mar Ser Co Hq. (2)
1709	Ser Bn Supply Equip Sec.
1711	H&S Co 2nd Ser MT (2)
1118	8th Comm Bn, FT (2)
1823	2nd Ser Bn Truck Co

Copy - some house

~~A-10 2nd Anglica FT (2)~~

TC-952
~~TC-962~~
~~#320~~

2nd Anglico FT (2) - MV Rep - ~~2nd~~
~~None~~
 ITR ~~turned~~

M-119
 M-120
 M-121
 M-122
 M-203
 M-255
~~M-327~~
~~330~~

MCSS (2)	2	MV Rep
(2) "	1	MP Shop
(2) "	1	welding shop
(2) "	1	Warehouse
(2) "	2	MT Rep - TIRE REPAIR
(2) "	3	M V Repair
(2) "		
0		Spiller

822

Physical Fitness Center Spiller, ~~HTS Co~~
 1st ITR

1-4

INGERSOLL - RAND HEATERS IN BLDG.
M.C.B.

Use

BLDG. # NO.	ORG.	PLANT ACCOUNT NO		
4 1405	SERV. CO. HQD B.N. 2ND DIV. M.T.	6700L- 659070 67001- 659069	M. Veh Rep Maint	2
5 1406	HQD. B.N. 2ND. MAR. DIV. M. T.	6700L- 659067 67001- 659068	" "	1
6 1709	SUPPLY CO. 2ND. SERV. B.N. M.T.	67001- 659068	" "	
7 1711	2ND. M.T. B.N. 2ND. MAR. DIV.	67001- 659085 6700L- 659079	" "	
8 1808	M.T. SERV. B.N. ENG. PLT.	67001- 659071 67001- 659087	" "	
10 1819	M.T. 2ND. MED. B.N.	67001- 659073	" "	
9 1817	TRUCK CO. (M.T.) 2ND. SER. B.N.	1- WITH NO ACCOUNT NO. 6700L- 659072	" "	
2 567	3TH. B.N. 10TH MAR. (M.T.)	67001- 659084	" "	
14 1828	ORD. MAINT. PLT. MAINT CO. 2ND. SER. B.N.	67001- 659098 67001- 659075	ORD MAINT	
11 1823	TRACKED VEHICLE SHOP. ORD. PLT. MAINT. CO. 2ND. SER. B.N.	67001- 659078	M. Veh Maint	
13 1827	MAINT. Co. M.T. 2ND. SER. B.N.	67001- 659076 67904- 659088	" "	
12 1826	MAINT. PLT. 2ND. SER. B.N. M.T.	67001- 659074 67901- 65908L	" "	
15 1841	REG. HQD. BATRY. 10TH MAR. M.T.	67001- 659083	" "	1
3 567	3TH. 10TH. MAR. M.T.	67001- 659084	" "	1
3 598	2ND. SER. B.N. M.T. SHOP	67001- 659077	" "	1
TP 449	8TH. COMN. B.N. WAREHOUSE	67001- 658313 67001- 658312	} warehouse	

next page

INGERSOLL - RAND HEATERS IN BLDG.
W.O.B.

BLDG. # NO. GRG. PLANT ACCOUNTING

1402	SERV. CO. HDQ. B.N. 2ND DIV. M.T.	67001 - 65908 67001 - 65908	Plant Accounting
1406	HDQ. B.N. 2ND MAR. DIV. M.T.	67001 - 65908 67001 - 65908	"
1709	SUPPLY CO. 2ND SERV. B.N. M.T.	67001 - 65908	"
1711	2ND M.T. B.N. 2ND MAR. DIV.	67001 - 65908 67001 - 65908	"
1808	M.T. SERV. B.N. ENG. FLT.	67001 - 65908 67001 - 65908	"
1810	M.T. 2ND. MED. B.N.	67001 - 65908	"
1812	TRUCK CO. M.T. 2ND. SER. B.N.	67001 - 65908	1 - WITH NO ACCOUNT NO.
267	3TH. B.N. 10TH MAR. M.T.	67001 - 65908	"
1828	QD. MAINT. B.N. FLT. MAINT CO.	67001 - 65908 67001 - 65908	QD. MAINT.
1829	TRACKED VEHICLE SHOP. ORD. FLT.	67001 - 65908	MAINT. CO. 2ND. SER. B.N.
1829	MAINT. CO. M.T. 2ND. SER. B.N.	67001 - 65908 67001 - 65908	"
1826	MAINT. FLT. 2ND. SER. B.N. M.T.	67001 - 65908 67001 - 65908	"
1841	REG. HQ. BATTY. 10TH MAR. M.T.	67001 - 65908	"
267	3TH. 10TH. MAR. M.T.	67001 - 65908	"
268	2ND. SER. B.N. M.T. SHOP	67001 - 65908	"
180	4TH. COMM. B.N. WAREHOUSE	67001 - 65908 67001 - 65908	Plant Accounting

LOCATIONS OF INGERSOLL-RAND HEATERS

<u>BLDG NO.</u>	<u>ORGANIZATION</u>	<u>USE</u>	<u>NUMBER OF HEATERS</u>
TP-449	8thCommBn, ForTrs	Warehouse	2
567	3dBn, 10thMar, 2dMarDiv MT	MtrVehMaint	1
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1405	SerCo, HqBn, 2dMarDiv MT	"	2
1406	HqBn, 2dMarDiv MT	"	1
1709	SupCo, 2dSerBn, 2dMarDiv MT	"	1
1711	2dMT Bn, 2dMarDiv	"	2
1808	MT Co, 2dSerBn, 2dMarDiv (EngrPlt)	"	2
1817	TrkCo (MT), 2dSerBn, 2dMarDiv	"	2
1819	MT Co, 2dMedBn, 2dMarDiv	"	1
1823	Tracked Veh Shop, OrdPlt, MaintCo, 2dSerBn, 2dMarDiv	"	1
1826	MaintPlt, 2dSerBn MT, 2dMarDiv	"	2
1827	MaintCo MT, 2dSerBn, 2dMarDiv	"	2
1828	OrdMaintPlt, MaintCo, 2dSerBn, 2dMarDiv	OrdMaint	2
1841	RegtHqBtry, 10thMar, 2dMarDiv	MtrVehMaint	1
TC-952	2dAnglico, ForTrs	"	2
M-119	MCSSS	"	2
M-120	MCSSS	"	1
M-121	MCSSS	Welding Shop	1
M-122	MCSSS	Warehouse	1
M-203	MCSSS	MtrVehMaint-Tire Repair	2

<u>BLDG NO.</u>	<u>ORGANIZATION</u>	<u>USE</u>	<u>NUMBER OF HEATERS</u>
M-255	MCSS	MtrVehMaint	3
822	Physical Fitness Center, SpecServices, 1st ITR		1



UNITED STATES GOVERNMENT

Memorandum

MCSS

ACT INFO INT

TO : Assistant Chief of Staff, G-4

FROM : Base Supply Officer

SUBJECT: Portable Space Heaters, 325,000 BTU

Ref: (a) Verbal conversation w/ Chief WHITTINGTON, Base Fire Inspector on 8 Nov 1966

0		
0		
1/ADJ	8/HWE/nmc	
	4400	
DATE:	14 Nov 1966	
3		
4		
PO		
SAL		
CO		

1. It was brought to the attention of this office on 9 November 1966 that the portable space heaters presently in use at Camp Lejeune are creating a serious fire hazard. This was discussed at length with the Base Fire Inspector, reference (a).

2. The fire hazard is caused by personnel inside the buildings moving subject heaters into dangerous locations, i. e., where painting is being performed, washing of parts with gasoline, etc., is being done.

3. In order to eliminate the fire hazard, it is recommended that the following action be taken:

- a. Install heaters permanently outside of buildings.
- b. Install ducts from heaters to inside of buildings.
- c. Issue a Frost Call that portable heaters (325,000 BTU) will not be used in working areas until the above is completed.

4. Location of portable heaters at Camp Lejeune is as follows:

<u>Quantity</u>	<u>Location</u>	<u>Activity</u>
2	Building A10	2d ANGLICO
1	Building GP-1	2d FAG
1	Building 739	2d FAG
6	M-120, 119, 122, 203, 255 and 121	MCSS

H. W. Evans, Jr.
H. W. EVANS, JR.

Memorandum

8/HW/EA/mmc

4400

DATE: 14 Nov 1966

TO : Assistant Chief of Staff, G-1

FROM : Base Supply Officer

SUBJECT: Portable Space Heaters, 325,000 BTU

REF: (a) Verbal conversation w/Chief WHITTINGTON, Base Fire Inspector on 8 Nov 1966

1. It was brought to the attention of this office on 9 November 1966 that the portable space heaters presently in use at Camp Lejeune are creating a serious fire hazard. This was discussed at length with the Base Fire Inspector, reference (a).

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- a. Install heaters permanently outside of buildings.
- b. Install ducts from heaters to inside of buildings.
- c. Issue a Frost Call that portable heaters (325,000 BTU) will not be used in working areas until the above is completed.
- 4. Location of portable heaters at Camp Lejeune is as follows:

Quantity	Location	Activity
5	Building A10	29 ANGLICO
1	Building GP-1	24 FAG
1	Building 739	24 FAG
6	M-150, 119, 122, 203, 225 and 121	MCS2

H. W. EVANS, JR.

DRAFTED BY J. F. NADER		PHONE EXT NR 7-5545		PAGE 1	PAGES 1
TOR/TOD 17 NOV 1966		ROUTED BY J. T. PERKINS		CHECKED BY	

MESSAGE NR <i>09/4541</i>	DATE/TIME GROUP (GCT) <i>171105Z</i>	PRECEDENCE	FLASH	EMERGENCY	OPERATIONAL IMMEDIATE	PRIORITY	ROUTINE	DEFERRED
		ACTION				X		
		INFO				X		

FROM: CG MARCORB CAMLEJ
TO: CG, 2D ANGLICO
CG, 2D FAG
CG, NCSS

INFO: CG SECOND WARDIV FMF
CG FORTRPS FMFLANT

FIRE HAZARD

A. MCB SUPO LTR SER 4400 OF 14NOV66 (NOTAL):

1. REF A INDICATED FIRE HAZARD EXISTS IN YOUR ORGANIZATIONS DUE FOLLOWING IMPROPER USE OF PORTABLE HEATERS (325,000 BTU):

- A. HEATERS IN USE WHERE PAINTING IS IN PROGRESS**
- B. HEATERS IN USE NEAR WHERE PARTS BEING CLEANED IN GASOLINE**

2. CORRECT SITUATIONS A AND B ABOVE IMMEDIATELY. COPY REF A SENT YOUR ORGANIZATION VIA GUARD MAIL THIS DATE FOR FURTHER DETAILS.

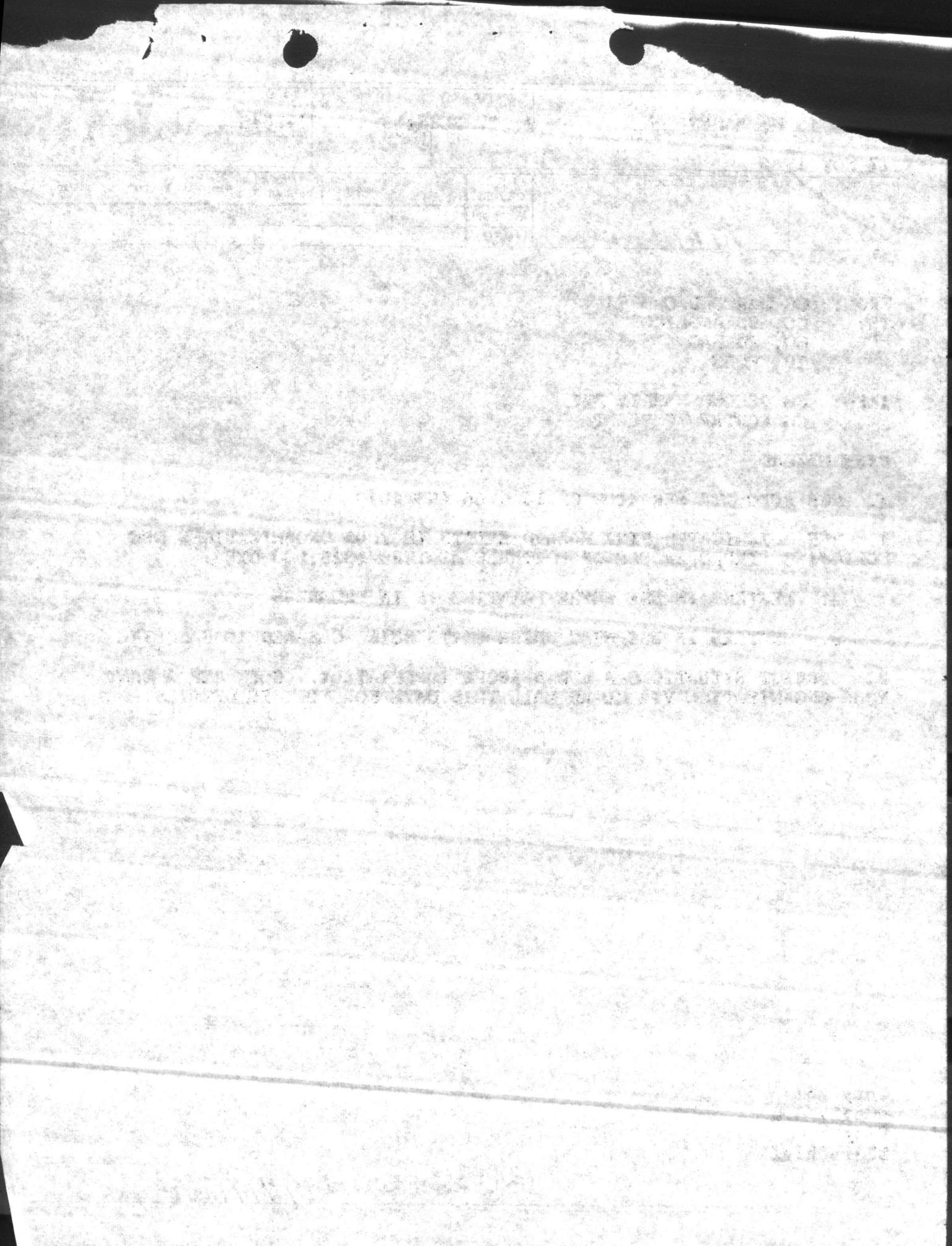
DISTRIBUTION

(PAGE ONE ONLY)

Copy to:
ACoIS, G-4
BSupO
BFireChief

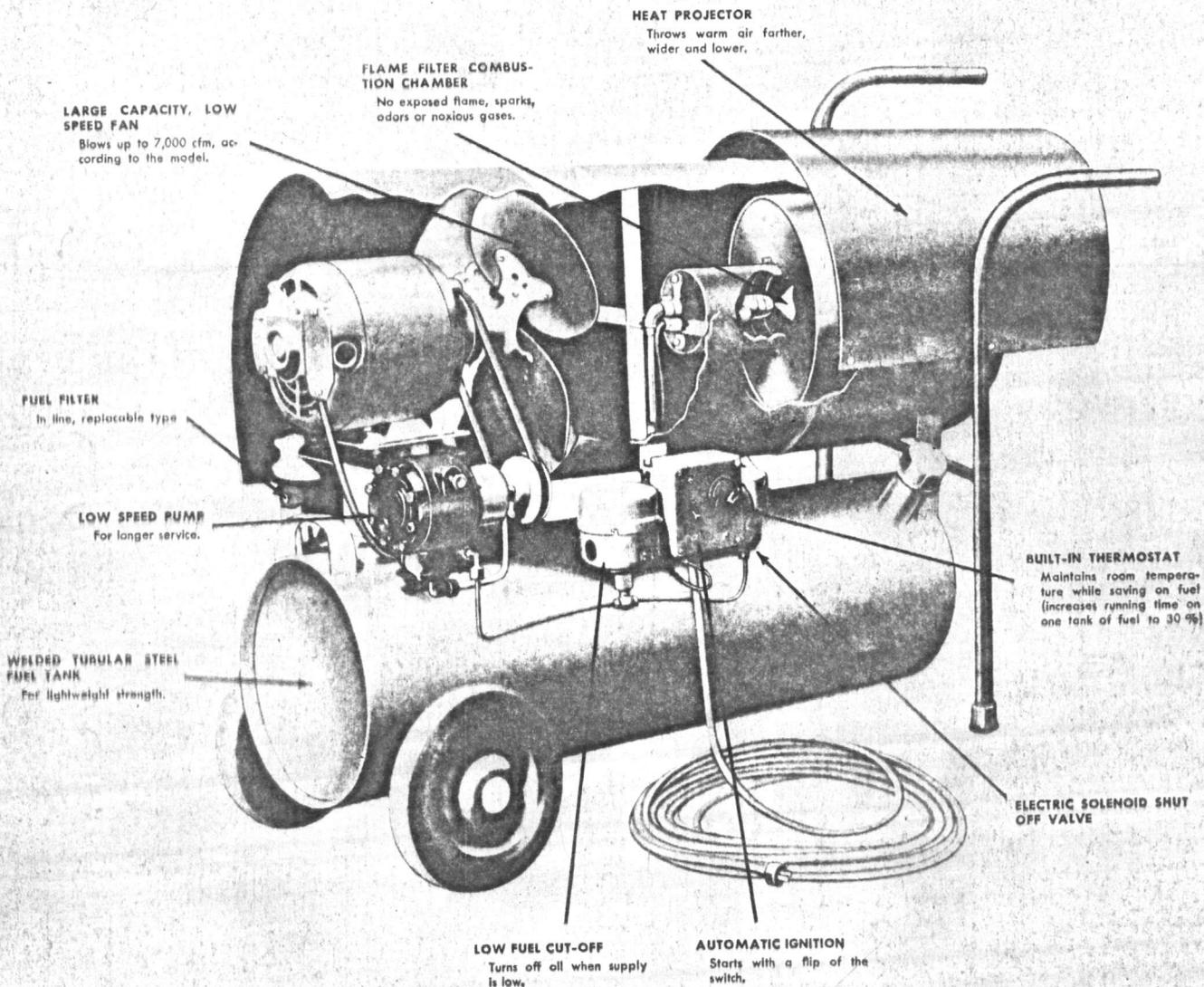
UNCLASSIFIED

DATE/TIME GROUP (GCT) <i>171105Z</i>





PORTABLE HEATERS



Ingersoll-Rand Portable Space Heaters bring heat to your job for just pennies an hour. Each model (and there are 5 models to choose from) has been designed to guarantee the maximum in safety, efficiency and dependability. You can get either large volume air movement with a small temperature rise or a lesser volume air movement with a high temperature rise, making them truly versatile space or spot heaters.

Whether heating a room, building or a draped off area,

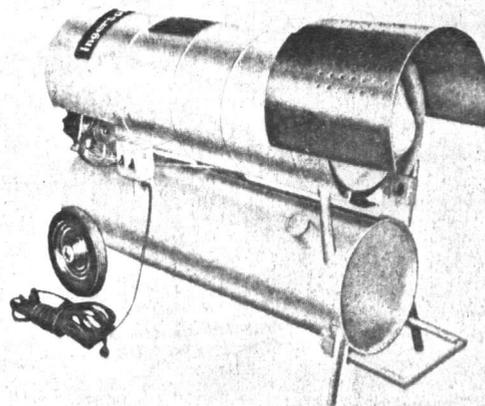
or spotting heat on men, machinery or materials, these Ingersoll-Rand Space Heaters (with capacities ranging from 170,000 to 1,000,000 BTU's) will keep your job on the go.

Remember, freezing temperatures need no longer stop your jobs . . . you can keep them moving with an Ingersoll-Rand all-weather, all-purpose portable space heater.

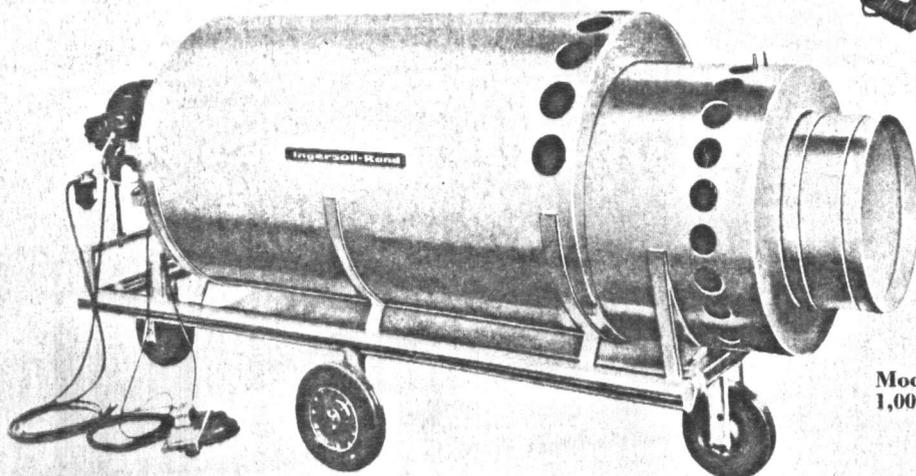




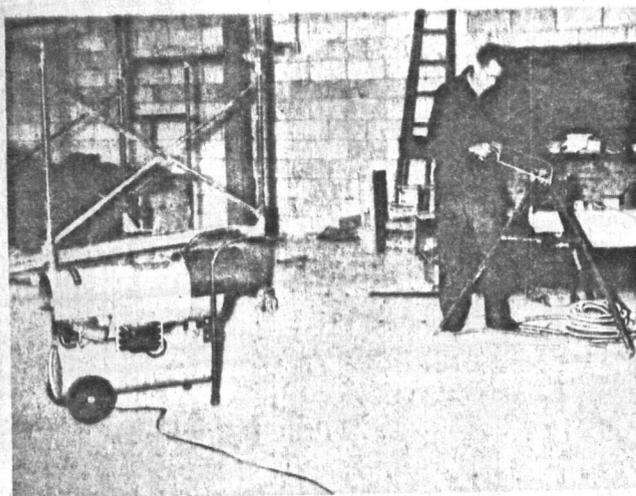
PORTABLE HEATERS



Model HPE040A2
400,000 BTU Capacity



Model HPE100A3
1,000,000 BTU Capacity



SPECIFICATIONS

Model	Heat Output BTUs	Air Delivery CFM	Weight Lbs.	Shipping Dimensions	Fuel	Burning Time Hrs.	Tank Capacity Gal.	Motor hp.	Voltage Required	*Equipment
HPE015A1	170,000	600	98	L. 36", H. 28" W. 19"	Kerosene No. 2 Fuel Oil	10-13	8½	1/6	110 v. 60 cy.	3, 4, 5
HPE015A2	170,000	600	98	L. 36", H. 28" W. 19"	Kerosene No. 2 Fuel Oil	10-13	8½	1/6	110 v. 60 cy.	1, 2, 3, 5
HPE035A1	350,000	1850	195	L. 44", H. 39" W. 21"	Kerosene No. 2 Fuel Oil	16	32	1/3	110 v. 60 cy.	3, 4, 5
HPE040A2	400,000	1850	195	L. 44", H. 39" W. 21"	Kerosene No. 2 Fuel Oil	16	32	1/3	110 v. 60 cy.	1, 2, 3, 4, 5
HPE100A3	1,000,000	7000	700	L. 105", H. 48" W. 34"	Kerosene No. 2 Fuel Oil	7 Gal. per.	Ind.	Fan ¾ Burner ½	110 v. 60 cy.	1, 2, 3

*Equipment—1. Flame Failure Safety Control.

2. Thermostatic Switch Control.

3. Solenoid Oil Valve. 4. Manual Switch.

5. Low Fuel Cut-off Switch.



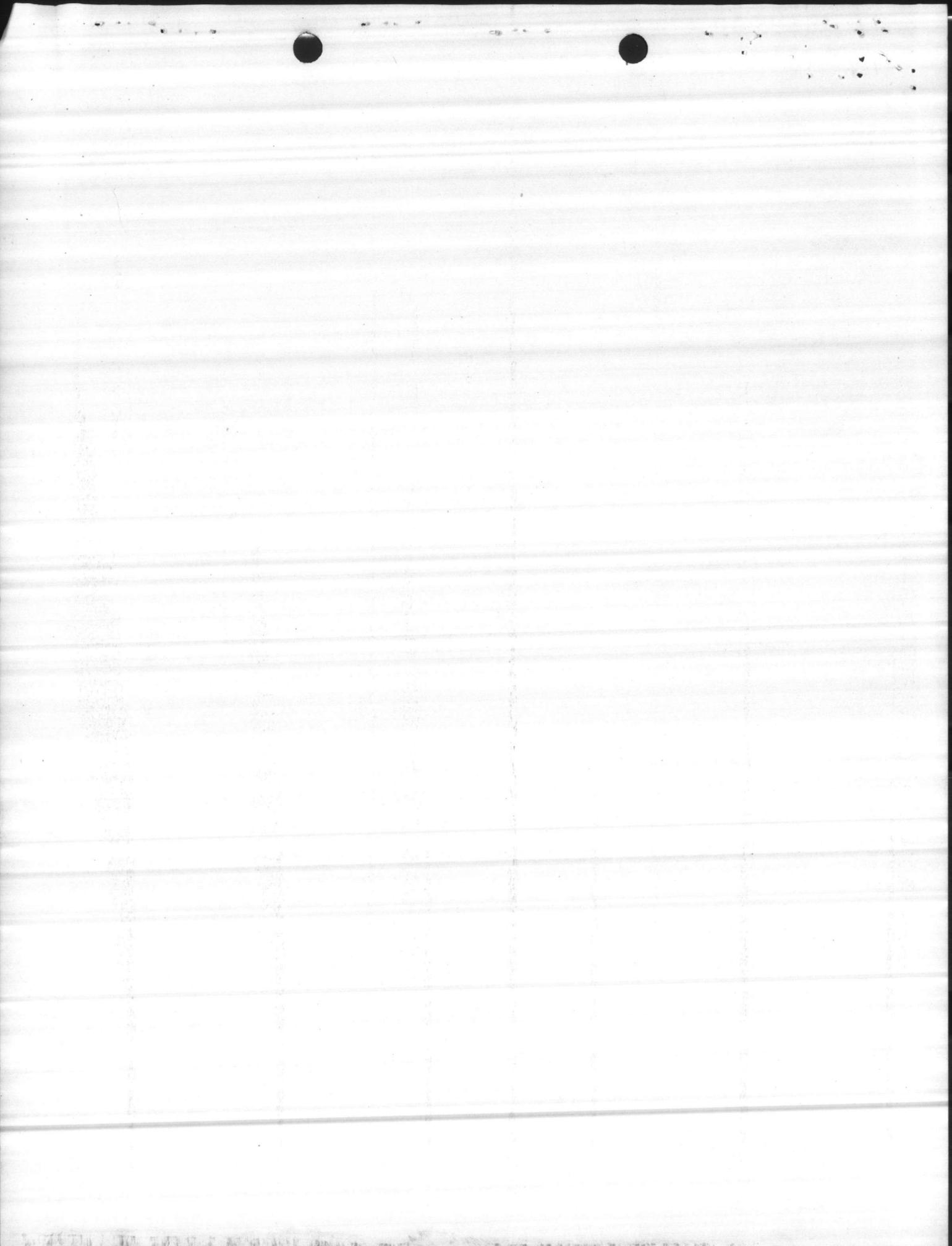
SPACE HEATERS REQUIRED

RUC

BLDG (ORG)	EXISTING HEATERS		ADDITIONAL HEATERS REQUIRED		REMARKS
	QTY	TYPE	QTY	TYPE	
210 (2d Mar)	1	48,000 BTU	2	48,000 BTU	6,000 cuft (perm) police shed/offices ✓
413 (8th Mar)	3	48,000 BTU	1	48,000 BTU	7,000 cuft (perm) supply room ✓
436 (8th Mar)	3	70,000 BTU	1	70,000 BTU	28,450 cuft (perm) supply work space ✓
444 (8th Mar)	1	48,000 BTU	3	48,000 BTU	14,327 cuft (perm) police room/comm work area ✓
530 (2d SP)	None		1	48,000 BTU	7,312 sqft (perm) company storeroom ✓
572 (10th Mar)	None		1	48,000 BTU	2,432 cuft (frame) offices ✓
598 (2d Serv)	1	25,000 BTU	1	250,000 BTU forced air	2,800 sqft (Butler) office and work space ✓
1205 (2d Mar)	3	48,000 BTU	1	48,000 BTU	1,931 sqft (Butler) maintenance shop ✓
1406 (HqBn)	4	75,000 BTU (2#)	4	250,000 BTU forced air	27,611 cuft (perm) MT maint shops/office/ record, tool and parts rooms ✓
1711 (2d MT)	None		2	250,000 BTU forced air	7,236 sqft (Butler) company storerooms ✓
1801 (10th Mar)	None		2	48,000 BTU	4,788 cuft (Butler) armory/issue room ✓
1808 (2d Serv)	3	75,000 BTU	2	250,000 BTU forced air	8,000 sqft (Butler) office and work space ✓
1809 (2d Engr)	1	50,000 BTU	4	70,000 BTU	134,000 cuft (Butler) MT maint shop ✓
1810 (2d Engr)	2	75,000 BTU	2	70,000 BTU	153,600 cuft (Butler) Equip maint shop ✓
1817 (2d Serv)	6	50,000 BTU	3	250,000 BTU forced air	12,000 sqft (Butler) shop space ✓

PENDING
 ORDER
 AT BTU TO FU

Enclosure (1)



BLDG (ORG)	EXISTING HEATERS		ADDITIONAL HEATERS REQUIRED		REMARKS
	QTY	TYPE	QTY	TYPE	
1822 (2d Serv)	3	50,000 BTU	1	250,000 BTU forced air	4,000 sqft (Butler) office and work space
1823 (2d Serv)	2	75,000 BTU	1	250,000 BTU forced air	4,000 sqft (Butler) ✓ tracked vehicle repair
1826 (2d Serv)	1 8	50,000 BTU 75,000 BTU	2	250,000 BTU forced air	8,000 sqft (Butler) ✓ office/MT repair
1827 (2d Serv)	1 9	50,000 BTU 75,000 BTU	3	250,000 BTU forced air	12,000 sqft (Butler) ✓ office/MT repair
1828 (2d Serv)	9 1	50,000 BTU 75,000 BTU	1 2	70,000 BTU 250,000 BTU forced air	11,625 sqft (Butler) ✓ offices/ord maint shop
1841 (10th Mar)	1	75,000 BTU	2	250,000 BTU forced air	32,995 cuft (Butler) shop and office
MH-2 (HqBn)	2	50,000 BTU#	2	70,000 BTU	5,000 cuft (Quonset) office/barrack
MH-3 (HqBn)	2	50,000 BTU#	2	70,000 BTU	5,000 cuft (Quonset) barrack
MH-4 (HqBn)	2	50,000 BTU#	2	70,000 BTU	5,000 cuft (Quonset) barrack
MH-5 (HqBn)	1	50,000 BTU#	1	70,000 BTU	5,000 cuft (Quonset) mess hall
MH-6 (HqBn)	1	50,000 BTU#	1	70,000 BTU	5,000 cuft (Quonset) head
RI-1 (HqBn)	None		1	70,000 BTU	2,388 cuft (temp) port call office/barrack
* (HqBn)	None		1	70,000 BTU	8,000 cuft (frame) supply/living space
** (10th Mar)	None		1	48,000 BTU	224 sqft (frame) dispatch office



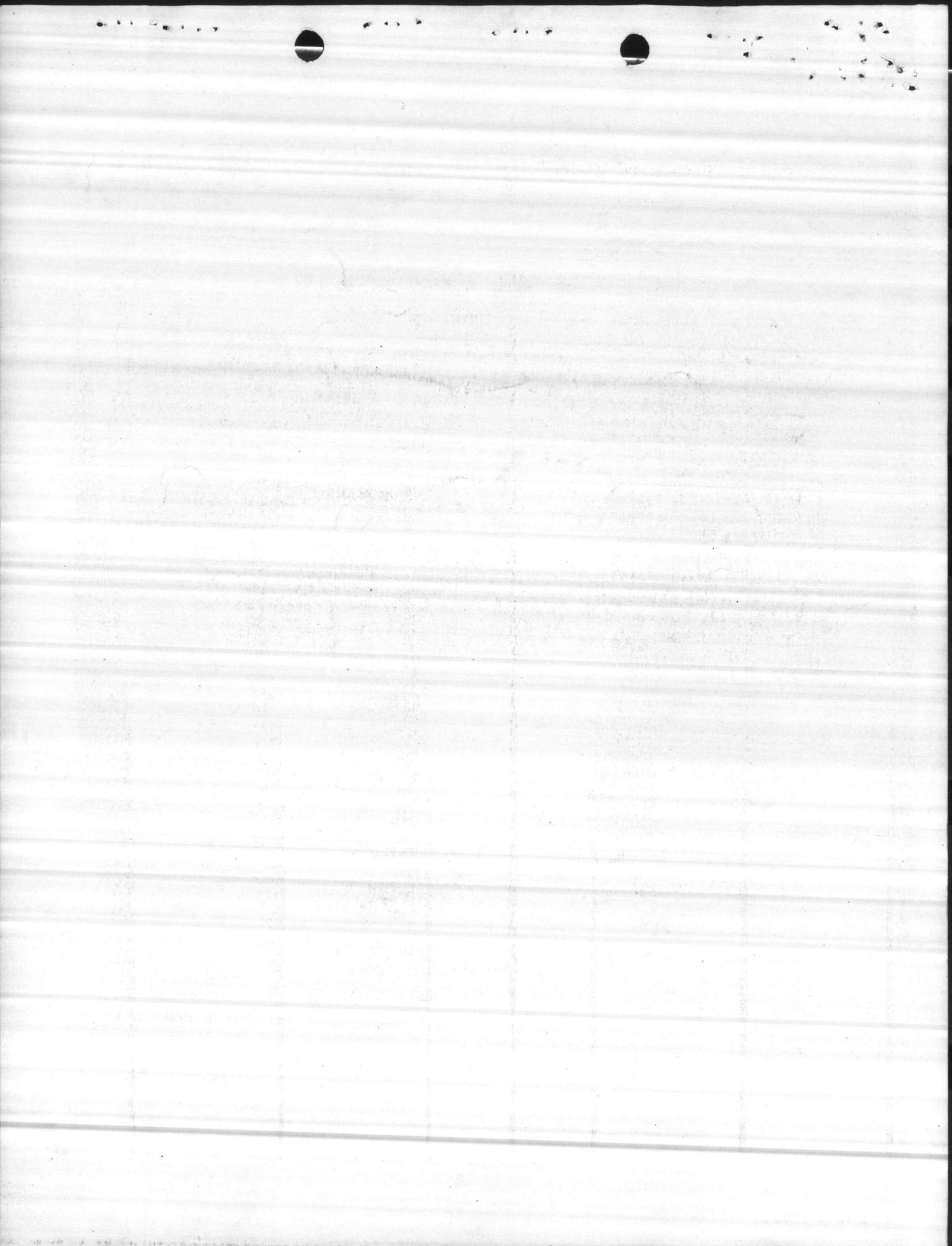
† To be replaced by requested heaters.

* Semipermanent building at Counterterrorism Warfare Center.

** Temporary building at 4th Bn, 10th Mar Motor Pool.

TOTAL REQUIREMENT

<u>QTY</u>	<u>TYPE</u>
3	20,000 BTU
12	48,000 BTU
18	70,000 BTU
23	250,000 BTU forced air



Assistant Chief of Staff, G-4, MCB

21 November 1966

Base Fire Marshal

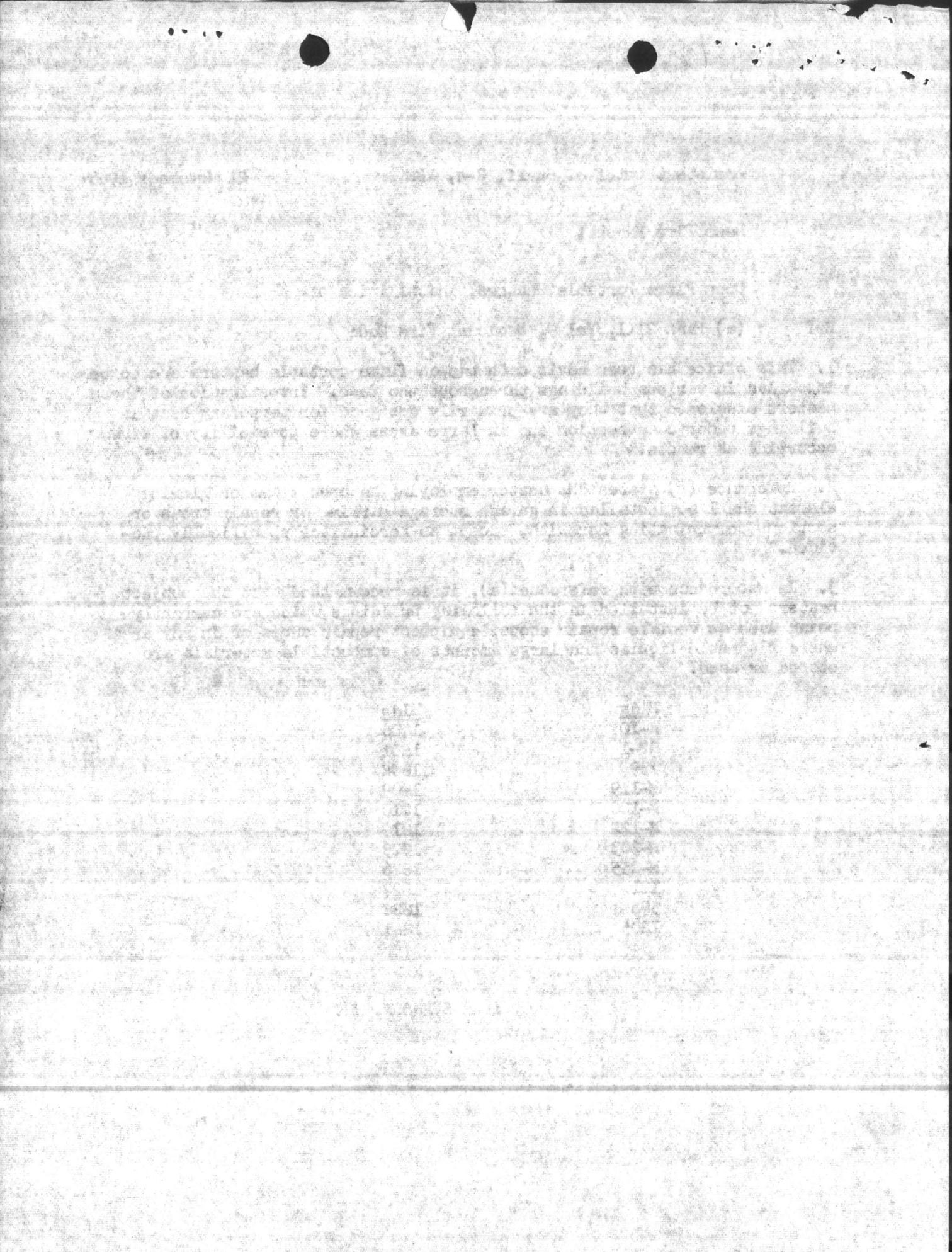
Open Flame Portable Heaters; installation of

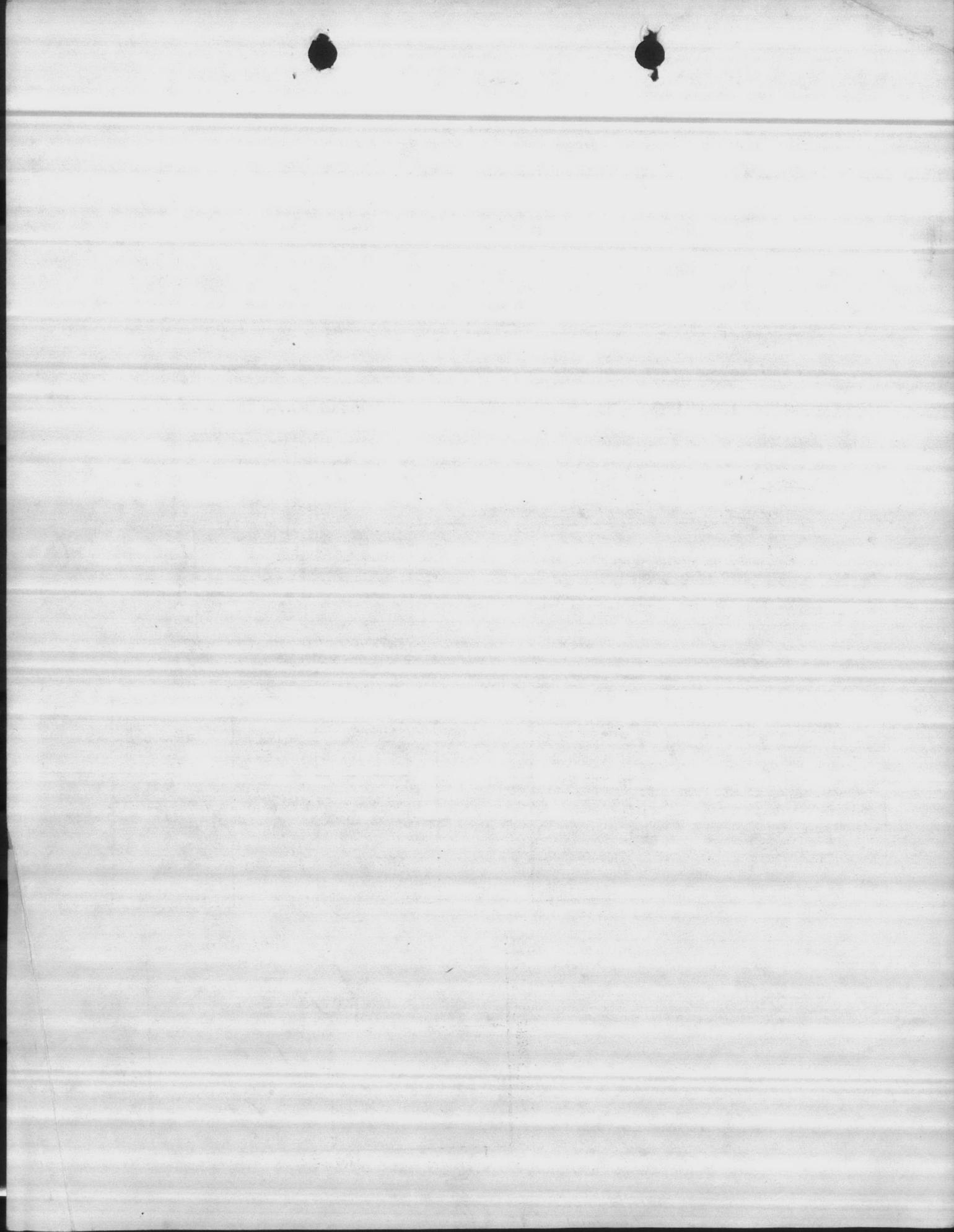
Ref : (a) Para 2111, Vol 9, National Fire Code

1. This office has been advised that open flame portable heaters are to be installed in various buildings throughout the Base. Investigation of these heaters disclosed that they are primarily designed for temporary heat in buildings under construction and in large areas where possibility of fire occurring is remote.
2. Reference (a) states "No heater employing an open flame or glowing element shall be installed in garage storage parking or repair areas or sections communicating herewith, except as hereinafter specifically provided."
3. In accordance with reference (a), it is recommended that the subject heaters not be installed in the following buildings which are currently being used as vehicle repair shops, equipment repair shops or in any area where flammable liquids and large amounts of combustible materials are stored or used.

<u>Bldg</u>	<u>Bldg</u>
A-10	1406
GP-1	1801
739	1808
M-119	1809
M-120	1810
M-122	1817
M-203	1823
M-255	1826
121	1827
598	1828
1205	1841

O. IVAR SVENSON, JR.





Inspection stow

CSK-2196-rmm

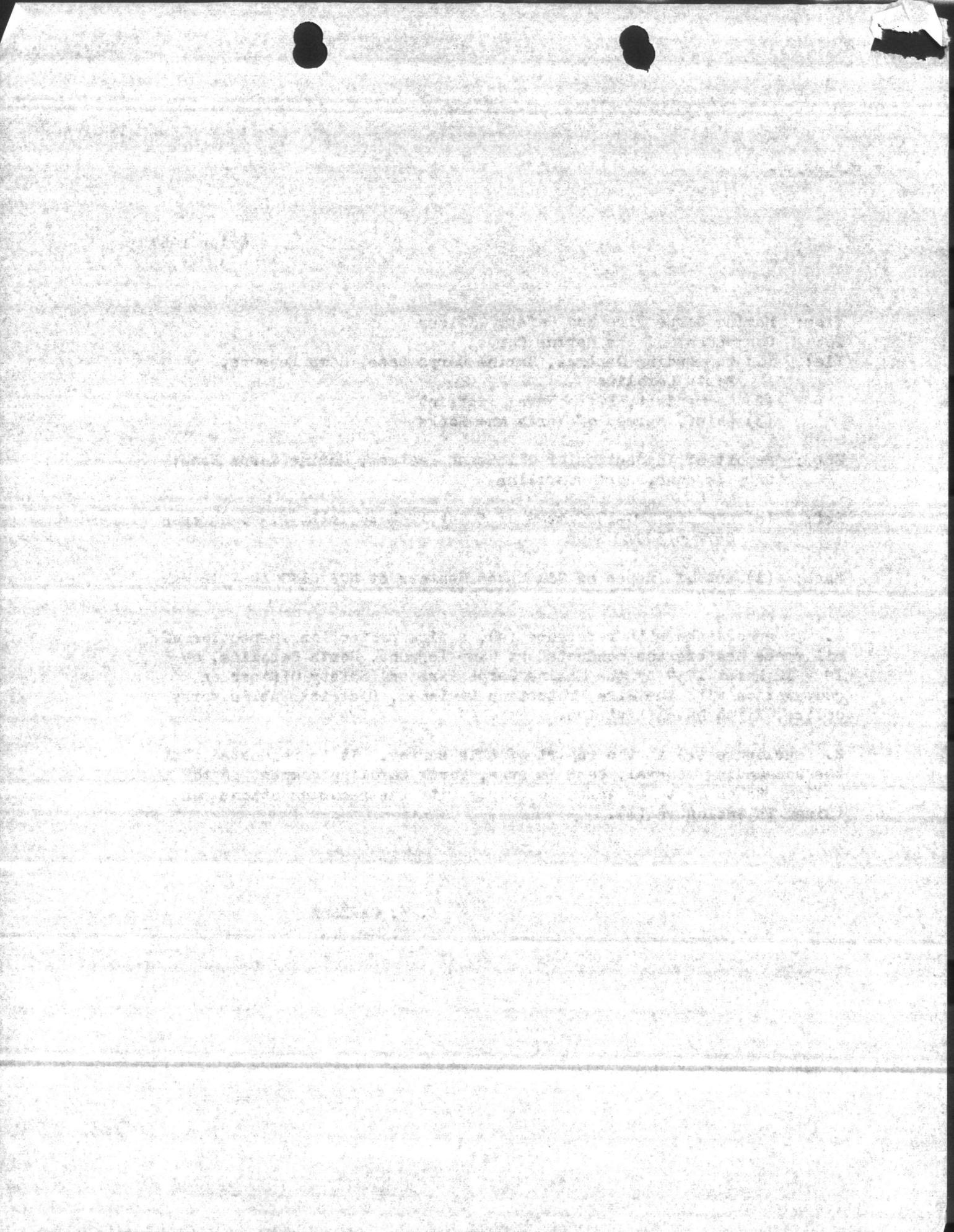
6 Apr 1954

From: Marine Corps Fire and Safety Officer
To: Commandant of the Marine Corps
Via: (1) Commanding General, Marine Corps Base, Camp Lejeune,
North Carolina
(2) Commandant, Fifth Naval District
(3) Chief, Bureau of Yards and Docks
Subj: Report of Inspection of Oil Space Heaters, Marine Corps Base,
Camp Lejeune, North Carolina
Ref: (a) CMC ltr DWG-1302-mb-9 of 5 Mar 1954 to 1stLt D. W. Carlson
057745/3001 USMCR
Encl: (1) Rpt of Inspec of Oil Space Heaters at MCB CMC 10 - 12 Mar
1954

1. In accordance with reference (a), a fire protection inspection of oil space heaters was conducted at Camp Lejeune, North Carolina, on 10 - 12 March 1954 by the Marine Corps Fire and Safety Officer in cooperation with the Fire Protection Division, District Public Works Office, Fifth Naval District.

2. Enclosure (1) is the report of this survey. It is requested that the Commanding General, Camp Lejeune, North Carolina comment as to actions taken or to be taken to comply with the recommendations contained in enclosure (1).

D. W. CARLSON



REPORT OF INSPECTION OF OIL SPACE HEATERS, MARINE CORPS BASE, CAMP LEJEUNE,
NORTH CAROLINA 10 - 12 MARCH 1954

I. MATERIALS IN USE

1. Space heaters

a. Type in use - The principle types of oil space heaters in use at the activity are manufactured by Lonergan Manufacturing Company, Albion, Michigan. The heat capacity of these stoves varies from 35,000 BTU's per hour to 75,000 BTU's per hour. Practically all of the stoves are equipped with blower fans. The majority of the heaters utilize a safety constant level oil control made by the Automatic Products Company. However, several stoves were noticed to be equipped with Duo-Therm oil control valves. These two control valves are of similar design.

b. The number in use - There are approximately 4,500 oil space heaters in use at the activity. No exact number could be determined, since these heaters are issued to the various accountable officers throughout the base.

c. Age of the units - Some of these heaters are known to be at least 11 years old. Based on the number of heaters supplied to Camp Lejeune in recent years, it appears that the average life of these heaters is approximately 8 years.

d. Procurement specifications - These oil space heaters were purchased in accordance with military specification MIL-H-10482A and a similar specification drawn up by Headquarters Marine Corps.

2. Oil

a. Grade - Kerosene is presently being provided to fire the 1,000 space heaters at Camp Geiger. Number 2 fuel oil is being used to fire the

remainder of the heaters at Camp Lejeune. The rated heat capacity expected from these heaters is based on the use of Number 1 commercial fuel oil or kerosene, however, the oil burners should operate satisfactorily when burning diesel fuel oil conforming to specification MIL-F-893, Class 3, at a temperature of 0° F.

b. Specification - The Number 2 burner fuel oil provided is bought in accordance with Federal Specification VV-F-815. The kerosene is purchased in accordance with Federal Specification VV-K-211C.

c. Quality - Discussions held with various members of this command indicated that the quality of the fuel provided has varied greatly from time to time. The fuel being provided at the time of this inspection appeared to be of good quality. When inferior grades of fuel oil have been used, it has been reported that some personnel have mixed gasoline with the fuel oil in order to obtain a fuel that would burn with greater intensity. This practice severely increases the inherent hazard of the heating operation and should not be allowed.

d. Distribution - Distribution is made from 55 gallon drums located along roadways, away from the barracks. The faucets on these drums are not self closing. At the end of the heating season, drums are emptied, and required to be vapor free before being placed in outside storage areas.

II. INSTALLATION OF SPACE HEATERS

1. Standard Installation - Heaters inspected during this survey indicated that proper clearances were being provided between heating units and combustible walls or materials. In some cases, smoke pipes do not

extend above the high point of the roof, which is necessary to secure required draft for proper combustion. In many instances down-draft caps are not installed on the smoke pipes. Without the caps, it is possible that a down-draft may extinguish the flame in a hot heater and an explosive re-ignition might occur.

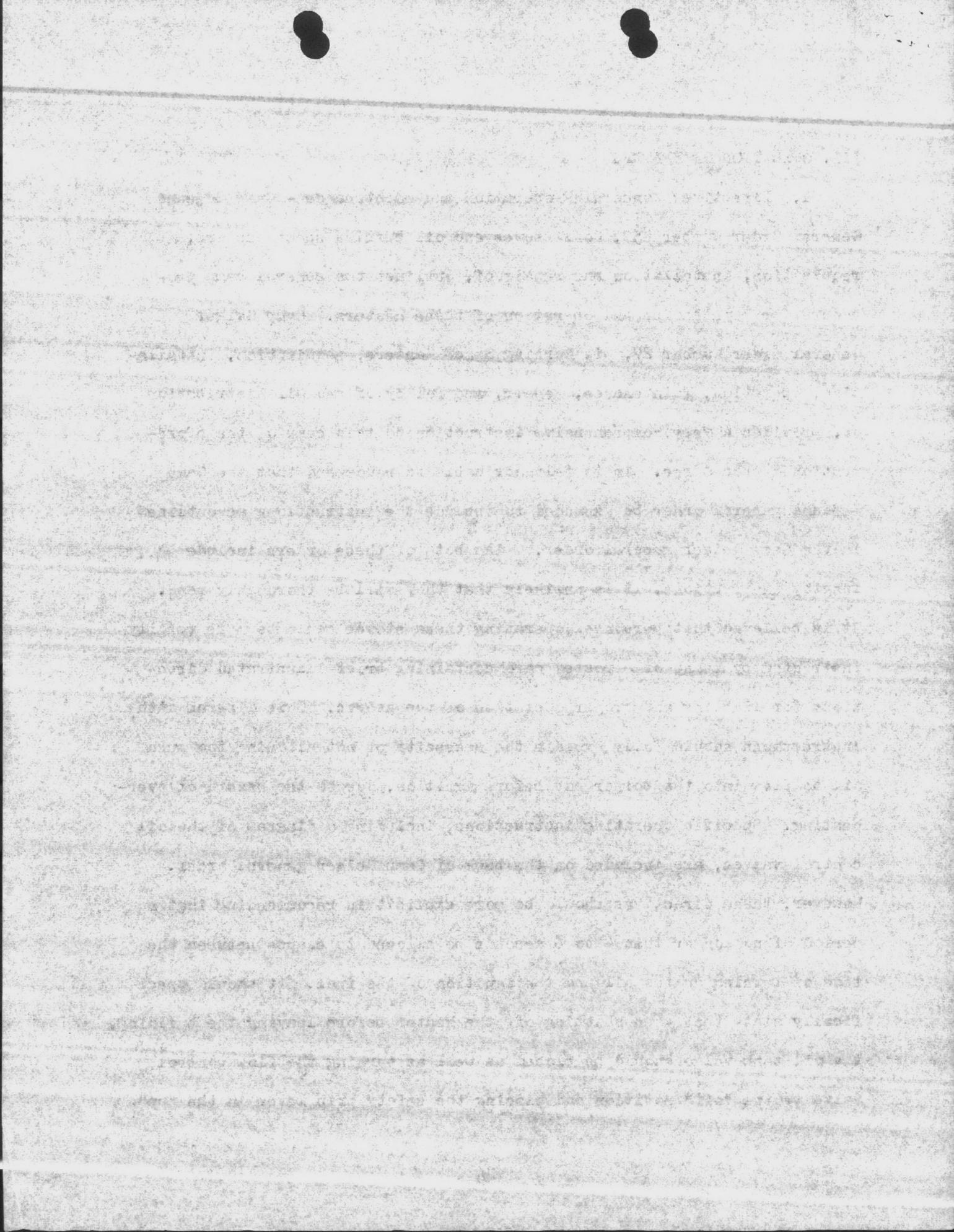
2. Quantity of heat provided - The amount of heat provided in some instances apparently is insufficient, particularly by the one centrally located heaters in the quonset type barracks. One of the underlying causes of fires occurring in these stoves has been the attempt by personnel to develop more heat from the unit than they are capable of safely producing.

3. Distribution of heat - The distribution of heat provided by these stoves appears to be as good as can be expected considering that the only convection provided is by the use of small fan blowers installed on some of the stoves.

4. Stability of the stoves - It was observed that none of these heaters are attached to the floor of the buildings which they heat. It is important for proper operation of the stoves that they be maintained level in accordance with manufacturer's Instructions. Most of the heaters are located in positions where they are subject to jarring and bumping by personnel and equipment. Heaters should be secured to the floor so that they may be maintained in a level position and to preclude the possibility of their being knocked over.

III. OPERATION OF HEATERS

1. Directives concerning operation and maintenance - Camp Lejeune General Order Number 459, Coal stoves and oil burning space heaters, requisition, installation and repair of, outlines the general camp procedure for maintenance and operation of these heaters. Camp Geiger General Order Number 27, Oil Burning Space Heaters, Requisition, Installation, Operation, Maintenance, Repair, and Policy of and Oil Distribution of, provides a very comprehensive instruction to this camp of the aforementioned procedures. It is felt advisable to recommend that the Camp Lejeune general order be expanded to include the instructions as outlined in the Camp Geiger general order. As both of these orders include lengthy instructions, it is unlikely that they will be thoroughly read. It is believed that personnel operating these stoves could be more readily instructed by means of a posted card containing brief illustrated directions for lighting and proper operation of the stoves. This diagram with instructions should fully explain the necessity of not allowing too much oil to flow into the burner pot before ignition, due to the hazard of overheating. Specific operating instructions, including a diagram of the oil control valves, are included on the back of Camp Geiger general order. However, these directives should be more explicit in recommending that a period of no longer than 4 to 6 seconds be allowed to elapse between the time of turning on the oil and the ignition of the fuel. It should specifically state that when shutting off the heater before leaving the building, the oil tank valve should be closed as well as turning the flow control valve to the "off" position and placing the safety trip lever in the "up"



position. These directives should also be revised to specifically state the hazard of overheating and maintenance involved in operating the heater. These directives should be revised so that personnel will read the precautions before they read the operating instructions.

X

2. Training and Indoctrination - At the present time no training and indoctrination is given to personnel at Camp Lejeune on the proper maintenance and operation of the stoves. Experience shows that no indoctrination is necessary for personnel living in the various housing areas where the stoves are usually operated by only one or two people. However, there appears a strong need for training of personnel in the Camp Geiger area and other areas where these units are used to heat working and barracks areas and where the stoves are subject to operation by many persons. The fire experience indicates that a majority of these personnel obviously do not understand the proper operation of the stoves. It is not felt that such training would have to be very extensive. If each unit commander were given an outline on the proper operation and maintenance of the stoves and the causes of the fires in the units, instructions of a duration of no more than 15 to 20 minutes should be sufficient to explain to the personnel the necessity for operating the units in accordance with directions. These instructions should be given before the heating season starts and reiterated from time to time as deemed necessary on the basis of fire experience.

3. Tampering with Heaters - It was stated by maintenance personnel that it has become the habit of many personnel to tamper with various devices on the stove in attempting to develop more heat. The oil control valve has been subjected to constant innovation by the personnel. Occasionally damper mechanisms have been tampered with. Maintenance per-

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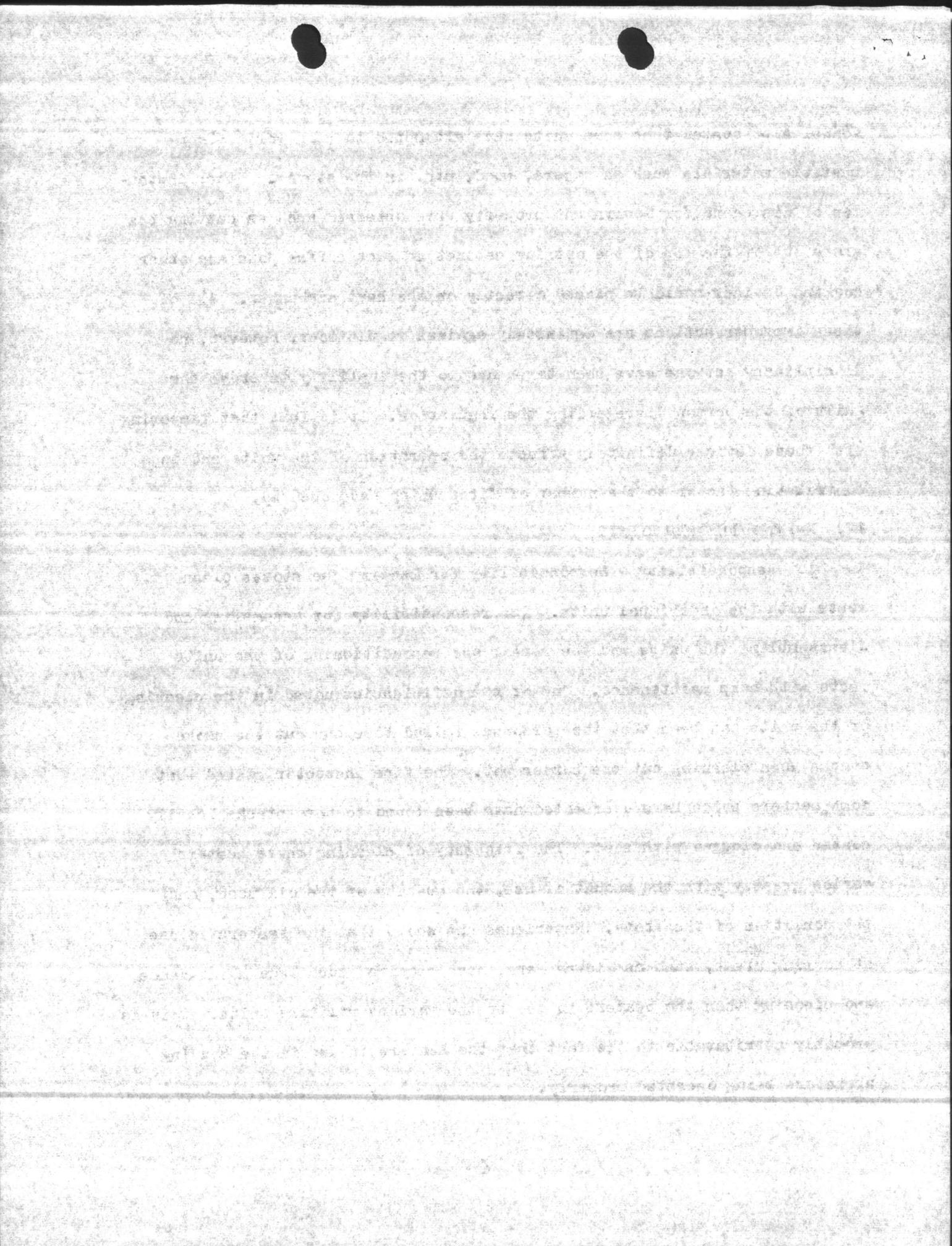
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sonnel also stated that some units have attempted to burn various combustible materials such as papers, wood, etc. in the stoves. Other instances of disregard for Government property were observed such as cutting the grate out of the top of the outside cabinet so that coffee pots and other cooking devices could be placed directly on the heat exchanger. All of these improper actions are definitely against regulations, however, no disciplinary actions have been taken due to the inability to prove the guilt of the person disregarding the regulation. It is felt that tampering with these devices definitely affects the operation of the units and is a contributing factor to the number of fires which have occurred.

IV. MAINTENANCE AND REPAIR

1. Responsibility - Responsibility for keeping the stoves clean rests with the individual units. The responsibility for assembling and disassembling the units and the repair and reconditioning of the units rests with camp maintenance. One of the deficiencies noted in the cleaning of the units has been that the personnel failed to clean out the smoke stacks when cleaning out the burner pot. The fire inspector stated that some heaters which have overheated have been found to have stacks heavily coated and clogged with soot. The frequency of cleaning these heaters varies greatly with the amount of use, the quality of the oil used, and the condition of the stove. Experience has shown that the heaters in use at housing areas, such as Midway Park, have required much less maintenance and cleaning than the heaters in use by the various military units. This is probably attributable to the fact that the heaters in use in the housing areas are being operated properly.



2. Staff - The Camp Geiger maintenance section utilizes two full time employees to repair and maintain the heaters at Camp Geiger. The Camp Lejeune maintenance section also utilizes two personnel. These personnel can repair on an average of six units per day per man.

V. FIRES

1. Typical Types of Fires Occurring.

a. The most frequent type of fire occurring is caused by the lack of knowledge by personnel in the case of overheating the stoves. The base general orders states that the personnel should follow the instructions in lighting the stove which are printed on the back of the stove. Included in these instructions is a statement that the oil control valve switch should be set on position number 4. This is contrary to the instructions recommended by the manufacturer of the oil control valve who states that the switch should be placed in the start position (number 1) when lighting off the stove. It would appear that starting the stove on position number 4 would allow a great amount of oil to flow into the pot before the stove is lit, then when the stove is lit this excessive amount of oil causes overheating. Interviews with personnel whose stoves had overheated indicated that in a majority of the cases they had set the control valve on position number 4, 5, and 6. The instructions state that as soon as oil appears in the burner pot the operator should ignite the oil. Such an instruction is very hard for the personnel to carry out because it is difficult to see when the oil is flowing into the pot. Since it is next to impossible to see the amount of oil that has flowed into the pot, the personnel must judge for themselves when there is enough oil for ignition. Personnel

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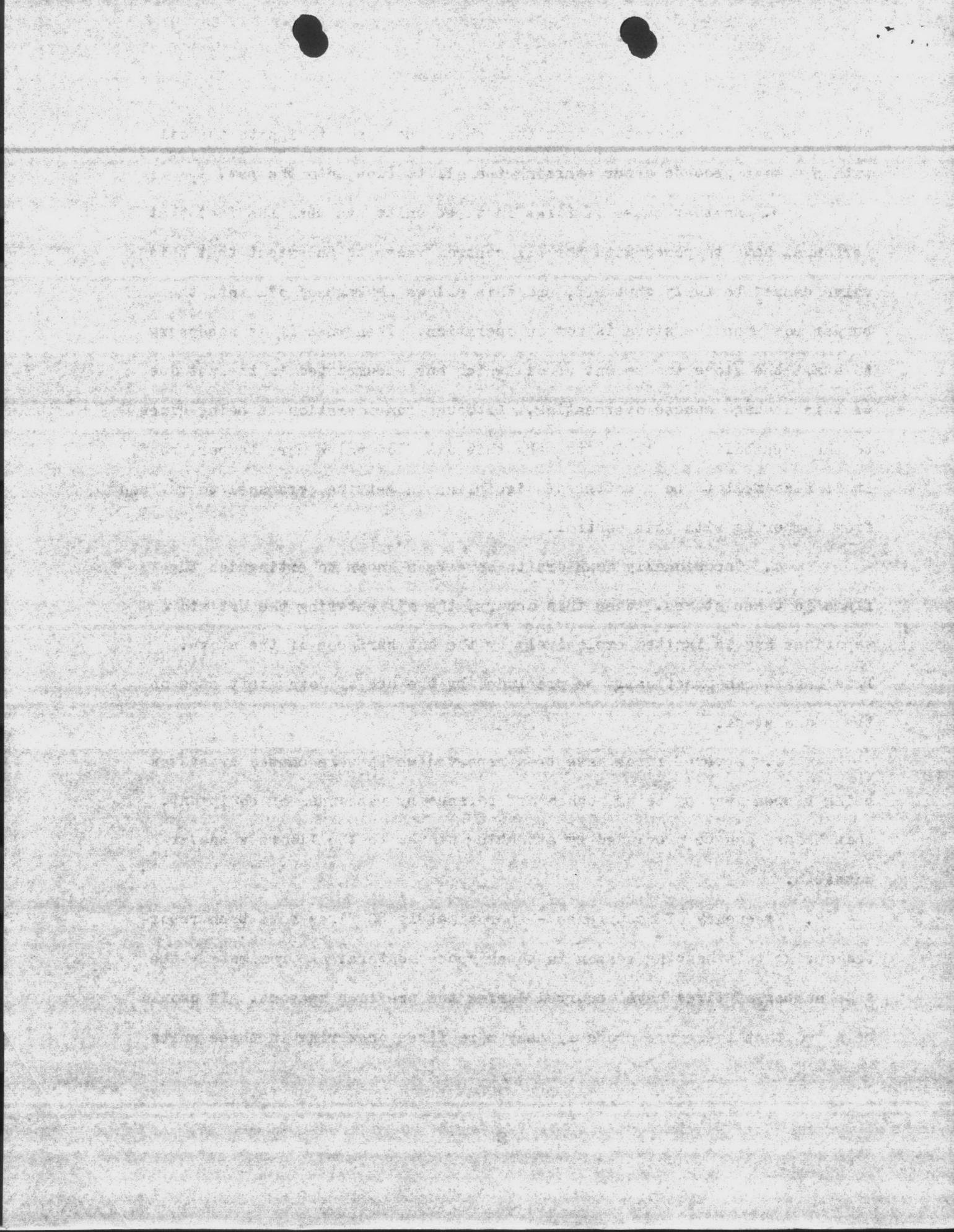
should be made to understand that they should be ready to ignite the oil within 4 to 6 seconds after starting the oil to flow into the pot.

b. Another cause of fires in these units has been the fact that personnel have tampered with the oil control valve to an extent that this valve cannot be fully shut off, and this allows leakage of oil into the burner pot when the stove is not in operation. Then when it is necessary to start the stove the amount of oil which has accumulated in the pot due to this leakage causes overheating. Although consideration is being given to the possibility of trying to make this oil flow valve more tamper proof, it is also felt to be a matter of discipline in getting personnel to refrain from tampering with this control.

c. Occasionally down drafts have been known to extinguish the flame in these stoves. When this occurs, the oil entering the hot stove vaporizes and is ignited explosively by the hot surfaces of the stove. This hazard can practically be precluded by the use of down draft caps on the smoke stack.

d. Several fires have been reported which were caused by stoves being tipped over by being pushed off balance by personnel or equipment. This hazard can be precluded by attaching stoves to the floors whenever possible.

2. Frequency of Occurrence - Approximately 80 fires have been reported during this heating season in these space heaters. Approximately the same number of fires have occurred during the previous seasons. It should be noted that there are probably many more fires occurring in these units



than are reported since many personnel are able to extinguish the fires themselves with no damage to equipment and do not report the fire.

3. Severity of Fires - The severity of fires caused by these stoves at this base, on an average, has not been high, however, at least one large loss has occurred each heating season for the past several years.

4. Comparative Experience - As stated before, the great majority of fires occurring in these heaters have occurred with the various military units and the experience in the housing areas has been good. This can be mostly attributed to the stability of the operators of the stoves.

5. Fire Protection Provided - The fire department is providing a sufficient quantity of CO2 extinguishers in the areas where there are great numbers of these stoves in use. This provision is in addition to the normal extinguisher protection provided.

VI. ADEQUACY OF DESIGN. The following suggestions should be taken into consideration by Headquarters Marine Corps when procuring new heaters.

1. Oil Control Valves - Due to the fact that these mechanisms have been consistently tampered with by unauthorized personnel, some method of designing a tamper proof control valve would improve the operation of this stove. It is recognized that it is necessary for maintenance personnel to repair this valve from time to time, however, it is felt that some method which would require the use of special keyways, screws, or tools, etc., to dismantle a valve, would stop the majority of this tampering and still allow for ease of maintenance.

2. Inspection of many of the heaters indicated that accessibility to the inside of the stove in order to clean it is not sufficient. It is felt that larger doors should be provided so that it is easier for the personnel to clean the stoves and also see into the pot to judge the amount of oil

THE FIRST PART OF THE REPORT IS A SUMMARY OF THE WORK DONE DURING THE YEAR.

THE SECOND PART IS A DETAILED ACCOUNT OF THE RESEARCH WORK DONE IN THE LABORATORY.

THE THIRD PART IS A SUMMARY OF THE RESULTS OF THE RESEARCH WORK DONE IN THE LABORATORY.

THE FOURTH PART IS A SUMMARY OF THE RESULTS OF THE RESEARCH WORK DONE IN THE LABORATORY.

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which has flowed in.

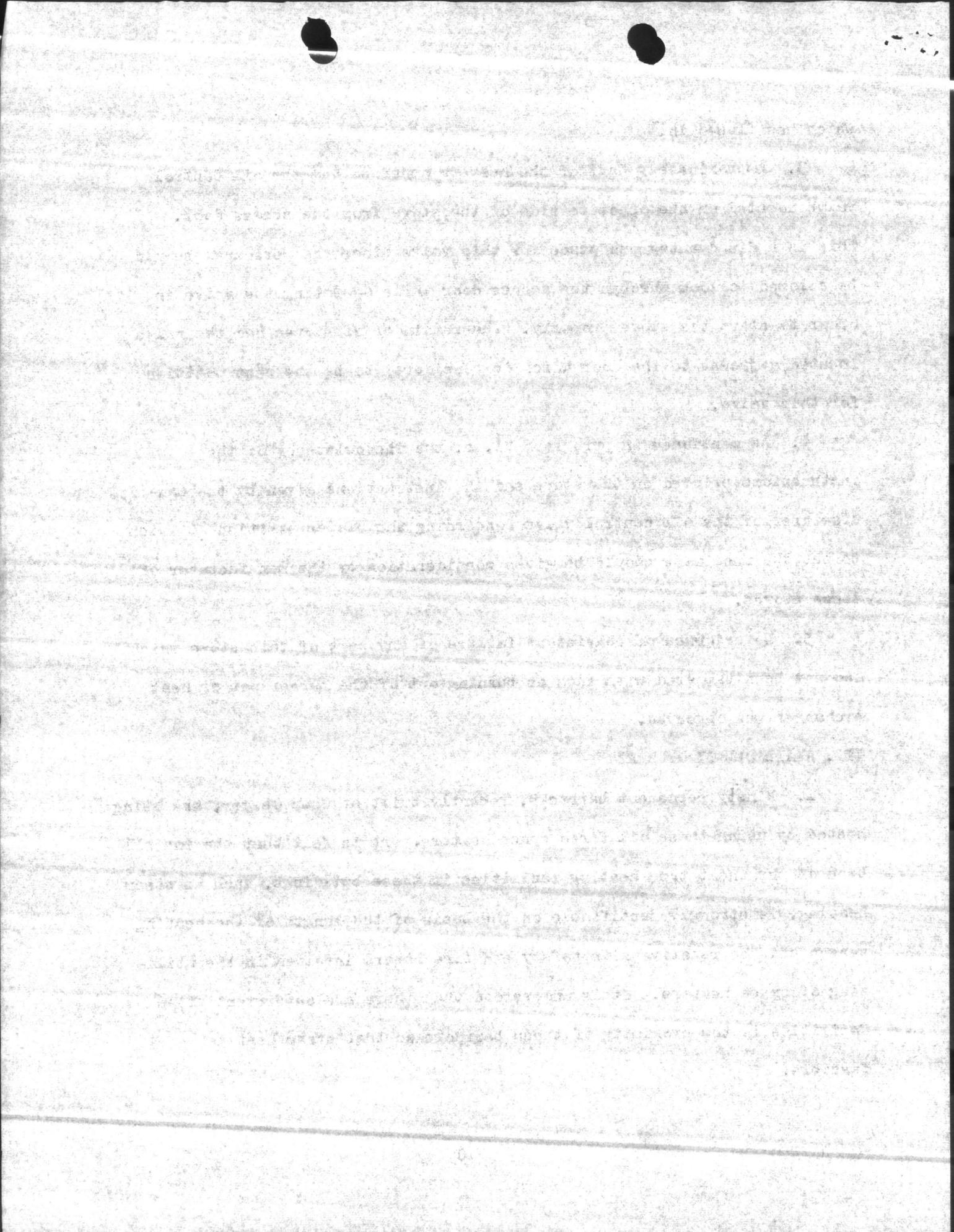
3. Approximately half of the heaters observed had the oil control valve located on the opposite side of the stove from the access door. This is a disadvantageous place for this valve since the personnel should be allowed to look through the access door while operating the valve in order to start the stove properly. The remainder of stoves had the valve located adjacent to the door which is considered to be the best position for this valve.

4. As mentioned in paragraph VI. a. the inconsistency of the instructions printed on the stove and the instructions given by the manufacturer of the oil control valve concerning the proper position at which to set the fuel flow should be given consideration by the manufacturer of these stoves.

5. No evidence of consistent failure of any part of this stove which had not been tampered with such as burning out of the burner pot or heat exchanger was observed.

VII. AVAILABILITY OF HEAT

1. Ninety permanent barracks, recently built at Camp Geiger, are being heated by using these oil fired space heaters. It is felt that the installation of permanent type heating facilities in these buildings, such as steam heating, is strongly justifiable on the basis of the length of the heating season and the relative life safety and fire hazard involved in the utilizing of space heaters. It is understood that there are sufficient steam facilities in the proximity of these barracks so that steam heat is feasible.



VII. RECOMMENDATIONS

1. Smoke stacks should extend two feet above the high point of the roof in all instances and should be adequately secured.
2. Down draft caps should be provided for all smoke stacks.
3. A training program should be implemented to indoctrinate all personnel living or working in buildings utilizing oil space heaters on the proper operation and maintenance of these heaters and the inherent hazards involved in these operations, as explained in paragraph III. 2.
4. The base newspaper and other means of promotion should be utilized to inform all personnel of the urgency of properly operating and maintaining these heaters to promote life and fire safety.
5. Personnel should be warned of disciplinary action which will be taken against personnel violating base regulations concerning tampering or damaging the stoves or contamination of the fuel with gasoline and other dangerous additives.
6. Stronger emphasis should be placed on the responsibility of all officers concerning the proper operation of these units.
7. Consideration should be given to having the camp maintenance personnel and/or fire inspectors make periodic inspections of the devices to ascertain that maintenance is being carried on by the accountable unit and make recommendations to the Commanding Officer when these units are not maintaining the stoves properly.
8. A brief, concise instruction should be promulgated utilizing a diagram showing the proper operation and maintenance of the stoves. This

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instruction should be posted in the proximity of all stoves which are in use. This instruction should state the causes of fires in these units before enumerating the operating and maintenance requirements.

9. Fuel oil no heavier than Grade 1, and preferably kerosene, should be used to heat all of the stoves at Camp Lejeune. Specific regulations prohibiting the mixture of gasoline or other additives with the fuel oil should be promulgated.

10. Camp Lejeune General Order 459 should be amplified to provide more operating information similar to that contained in Camp Geiger General Order 27.

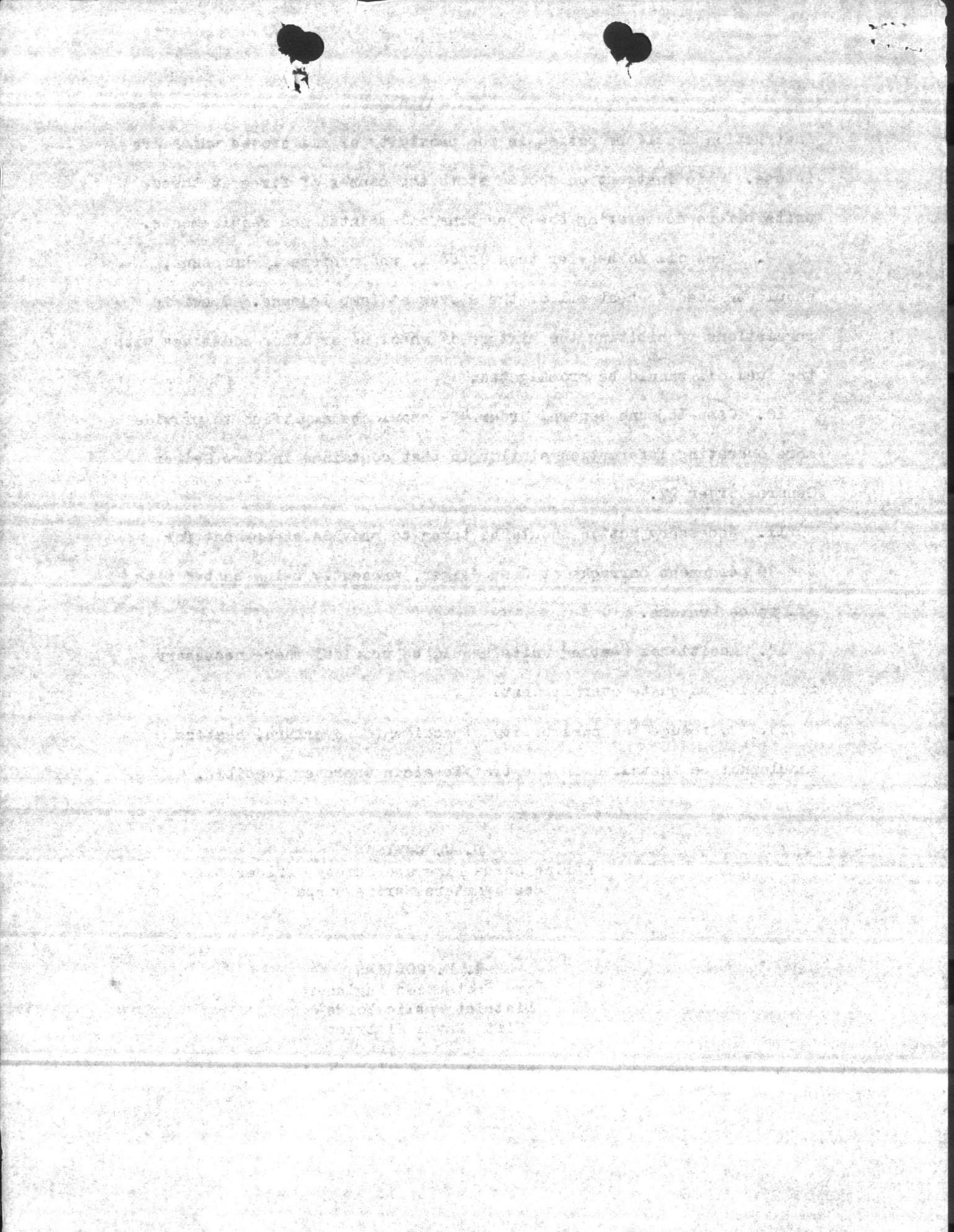
11. Necessary action should be taken to provide steam heat for the 90 permanent barracks at Camp Geiger, presently being heated with oil space heaters.

12. Additional heating units should be provided where necessary to provide adequate overall heat.

13. To reduce the possibility of accidental overturn, heaters should not be installed in the traffic aisle wherever feasible.

D. W. CARLSON
Marine Corps Fire and Safety Officer
Headquarters Marine Corps

W. E. COLLINS
Fire Protection Engineer
District Public Works
Fifth Naval District



EVERYDAY WE GAMBLE WITH FIRE----DO YOU KNOW THE ODDS?

Do you know each year we have-----550,000 Home Fire (more than 1,500 daily)

Over 5,500 people are killed in homes? (about six (6) times more are injured)

Over \$300 million home property loss

Where do Fires start?

Here are the room-by-room Fire Odds:

26.5% start in living rooms.

26.5 % start in kitchens.

14.4% start in halls, closets, etc.

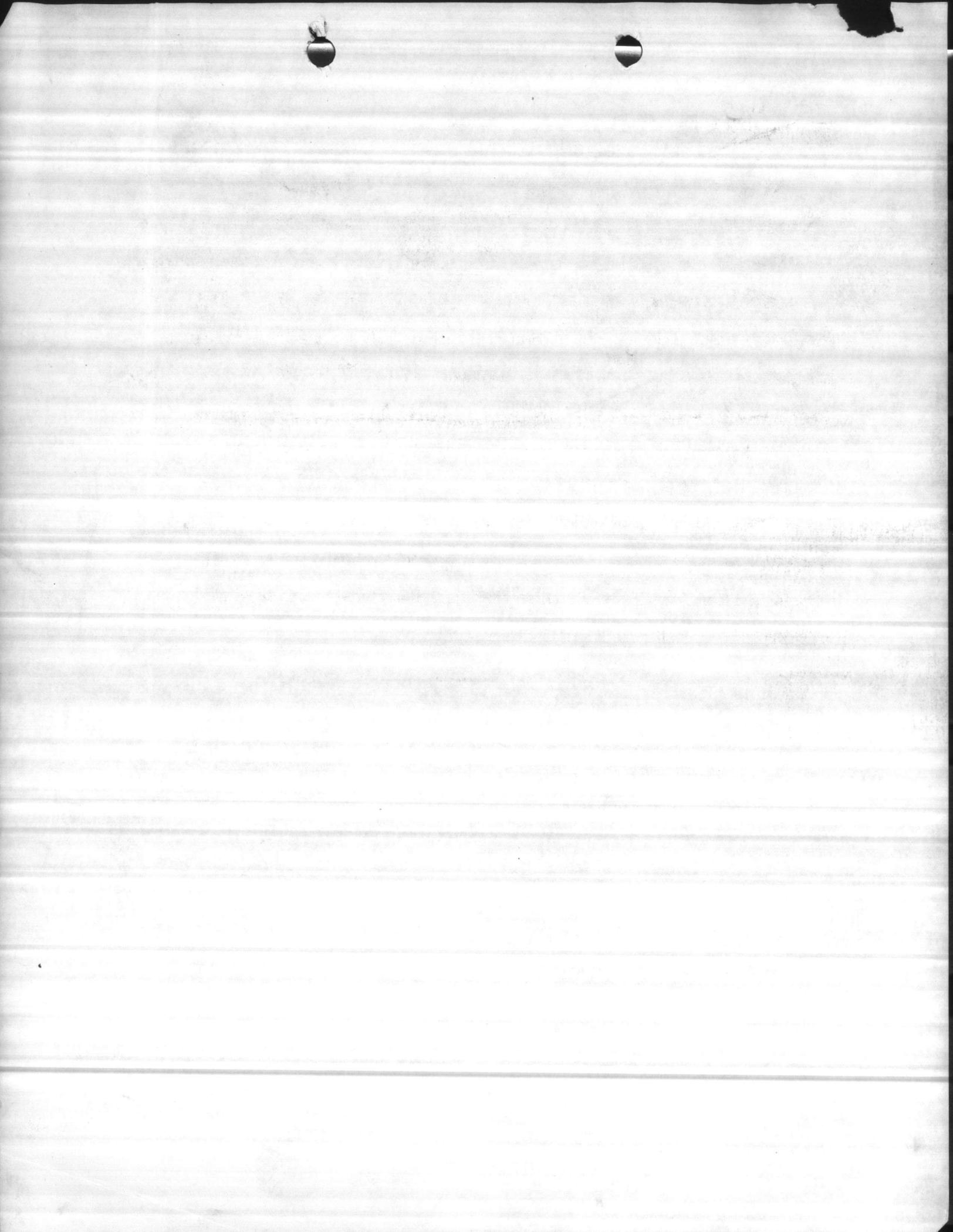
12.3% start in bedrooms.

10.4% start in basements.

5.2% start in concealed spaces in walls and floors.

4.7% start in attics.

And another home is "FIRE TRAPPED" every 60 seconds!



OIL SPACE HEATERS

Oil space heaters used throughout the area are considered to be hazardous. When not properly supervised, tenants are advised to be on the alert for any oil leaks, never leave combustible material near heater. For example, tenants should not attempt to hang clothing over or near heaters to dry, place laundry hampers or other objects near heater, etc. Instruct children to keep clear of heater. Base Housing and the Fire Department have provided safe operating instructions for these units. These instructions are issued to each new tenant. Read and become familiar with these instructions.

In the event of emergency, contact Base Maintenance, and if necessary, shut the fuel valve OFF at the fuel tank located outside of building.

At no time will tenant remove cover from carburetor or make any adjustments to carburetor mechanism.

GEIGER AND KNOX TRAILER PARKS

The Gas Supply Systems for Government-owned trailers is supplied by a private contractor who is responsible for:

1. Maintaining adequate supply of fuel at all times.
2. Connecting cylinder (gas fuel) to trailer supply system and advising the tenant when removing and connecting cylinders to a trailer.

In the event that a trailer is unoccupied or vacant at the time of connecting gas supply service (both tanks) the valve will be left in the OFF position, and the supplier will notify the Base Maintenance Department. It will be Base Maintenance's responsibility to turn on the gas valves when both cylinders have been replaced. Prior to turning on the cylinder valve, the gas mechanic or other qualified personnel assigned will ensure that all the stove and heater systems are in safe operating condition. Under no circumstances will the tenant disconnect the stove or heater. When moving into a trailer, Maintenance will check the entire gas and appliance system to ensure safe operating condition.

Base Housing Offices in the Trailer Parks provide specific operating instructions for the operation of heaters and stoves -- all tenants shall obtain copies and comply with their established procedures.

In the event of appliance or gas system malfunction, the tenant will call the emergency number and report this without delay. Tenants will secure gas burners when leaving the trailers for extended periods. Never leave cooking on stove in reach of small children.

The gas supply system for Government aircraft is supplied by a contract

operator who is responsible for

maintaining a supply of fuel at all times.

2. Contract operator (see 101) to install supply system and to

ensure the system works normally and promptly cylinders to a station.

In the event that a cylinder is damaged or expires at the time of connection

and supply system (both tanks) are replaced with a new one in the OI position.

and the operator will notify the Base Maintenance Department. It will be

the responsibility of the operator to ensure that the system is

operating properly and that the cylinders are replaced as required.

The operator will ensure that the system is maintained in accordance with the

instructions and that the cylinders are replaced as required.

It is the responsibility of the operator to ensure that the system is

operating properly and that the cylinders are replaced as required.

and the operator will notify the Base Maintenance Department.

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TT HOUSING AREAS - GAS AND OIL FURNACES

Tenants who use gas and oil heaters will comply with the following "Safe Operating Instructions:"

1. Do not, at any time, place clothing, furniture, boxes, etc., in front or beside the heater. This not only creates an immediate fire hazard, but may obstruct the air intake system and cause heaters to malfunction which could result in serious fires and explosions.

2. Tenants are responsible for removing and cleaning permanent type air filters located at base of heater at least monthly. Prior to removing this filter, tenant will place the thermostat in the OFF position.

3. Tenants will become familiar with the emergency CUT-OFF valve of gas supply, located just outside of residence and have a tool available for cutting off fuel source in the event of an emergency and maintenance cannot be reached.

4. In the vent of malfunction of oil-fired heaters, CUT-OFF electrical current source which operates oil pumps and blower fans.

5. Base Maintenance will be responsible for lighting of all gas fired heaters. The tenant will be responsible for proper operation as described above and shall report all malfunctions to Base Maintenance.

THESE ARE THE MAIN POINTS TO BE REMEMBERED

CONCLUSION

1. In most of any kind, place, building, house, etc., in front or inside the house. This not only covers an immediate fire hazard but any danger to the occupants and also means to the person who would be in a position to react.

2. Plans are responsible for knowing and giving information to you in a form located at the top of every page. It is to know this first, then with the knowledge in the X position. Plans will become easier with the emergency exit valve of

etc. etc., located throughout the house. It is a good habit to put outside of the house the very best of emergency and maintenance cannot be reached.

3. In the case of a fire, the first of all things to do is to get electrical current source which operates all things and power law.

4. The fire department will be responsible for fighting of all fire. The fire department will be responsible for proper operation of electrical source and will report all information to the fire service.



DEPARTMENT OF THE NAVY

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511 6287

TELEPHONE NO
AUTOVON 564-7564
804-444-7564
IN REPLY REFER TO

11320
09RF
24 March 1987

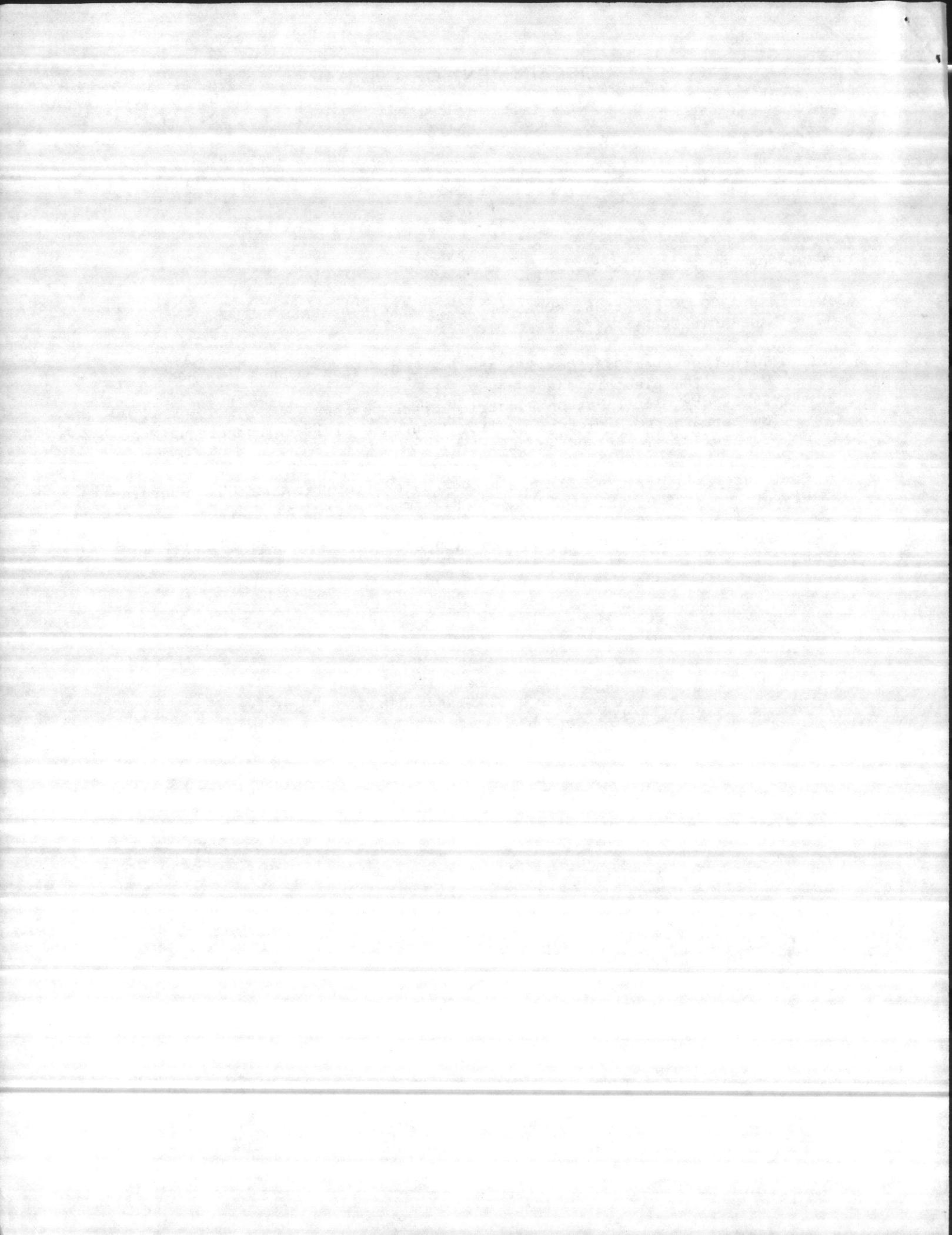
MEMORANDUM FOR FIRE CHIEFS

Subj: NSN 4520-00-555-8696, MODEL HF-12GT, ELECTRIC SPACE HEATER,
MANUFACTURED BY PATTON ELECTRIC

Encl: (1) Letter from GSA, Quality Assurance Division, concerning Model
HF-12GT electric space heater
(2) Safety alert: Patton Electric, Space heaters
(3) Letter from Director, Quality Assurance Division concerning Model
HF-12GT electric space heater

1. Enclosures (1), (2) and (3) are provided for your information concerning the use of NSN 4520-00-555-8696, Model HF-12GT electric space heater.
2. Please pass enclosures (1), (2) and (3) onto fire prevention, supply and safety.

E. W. Groft
E. W. GROFT
Area Fire Marshal
LANTNAVFACENGCOM





General Services Administration
Federal Supply Service
Washington, DC 20406

MAR 16 1987

Dear Sir:

We have received a copy of your correspondence dated February 21, 1986, on fire hazard sent to AIG 7729 directing them to remove the NSN 4520-00-555-8696, Model HF-12GT, electric space heater, manufactured by Patton Electric from all COMNAVBASE buildings and commands.

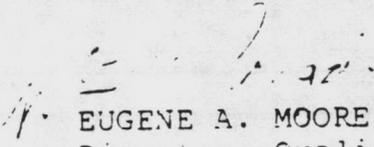
We appreciate your action to remove the units from service because of the fire hazard but we would like to inform you that Model HF-12GT heaters with manufacture dates after October 1985 are safe from fire hazards according to the Underwriters Laboratories. The newer heaters have a safe method of internal wiring that will not be subject to the delayed catastrophic failures experienced with some of the early Model HF-12GT heaters.

In our safe alert, a copy of which is enclosed, we advised customers of the procedures to follow to obtain repair of Model HF-12GT heaters which have the internal wiring problem. Even though a cutoff date of July 1, 1986, was established, we are confident that repair of any of these heaters can still be accomplished.

We suggest you survey your commands' supply of these heaters and arrange for return of the early model units, but we feel that later model units can be safely used and could be returned to service.

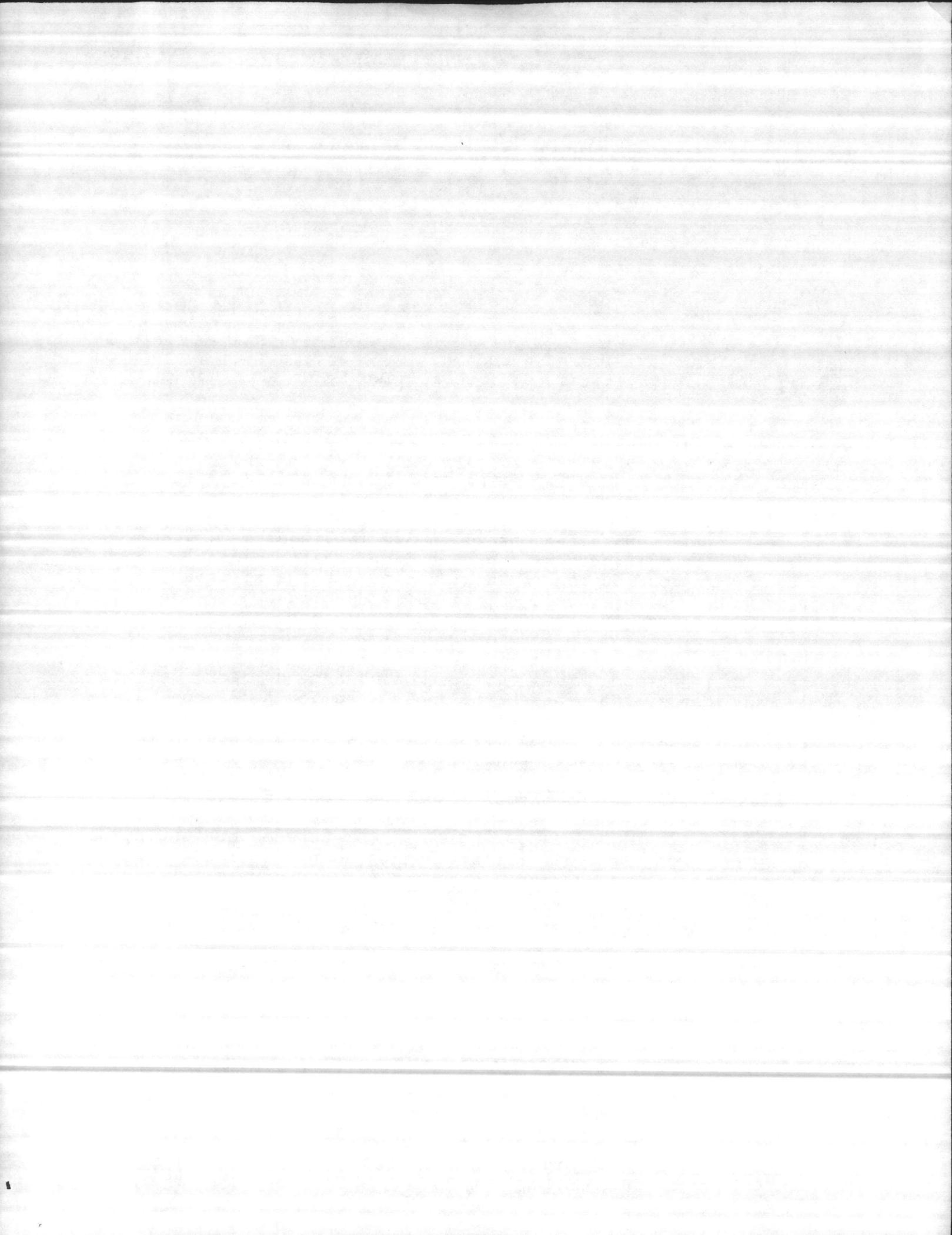
If you have any questions on this matter, please feel free to contact this office. The telephone number is commercial (703) 557-7997 or FTS 557-7997.

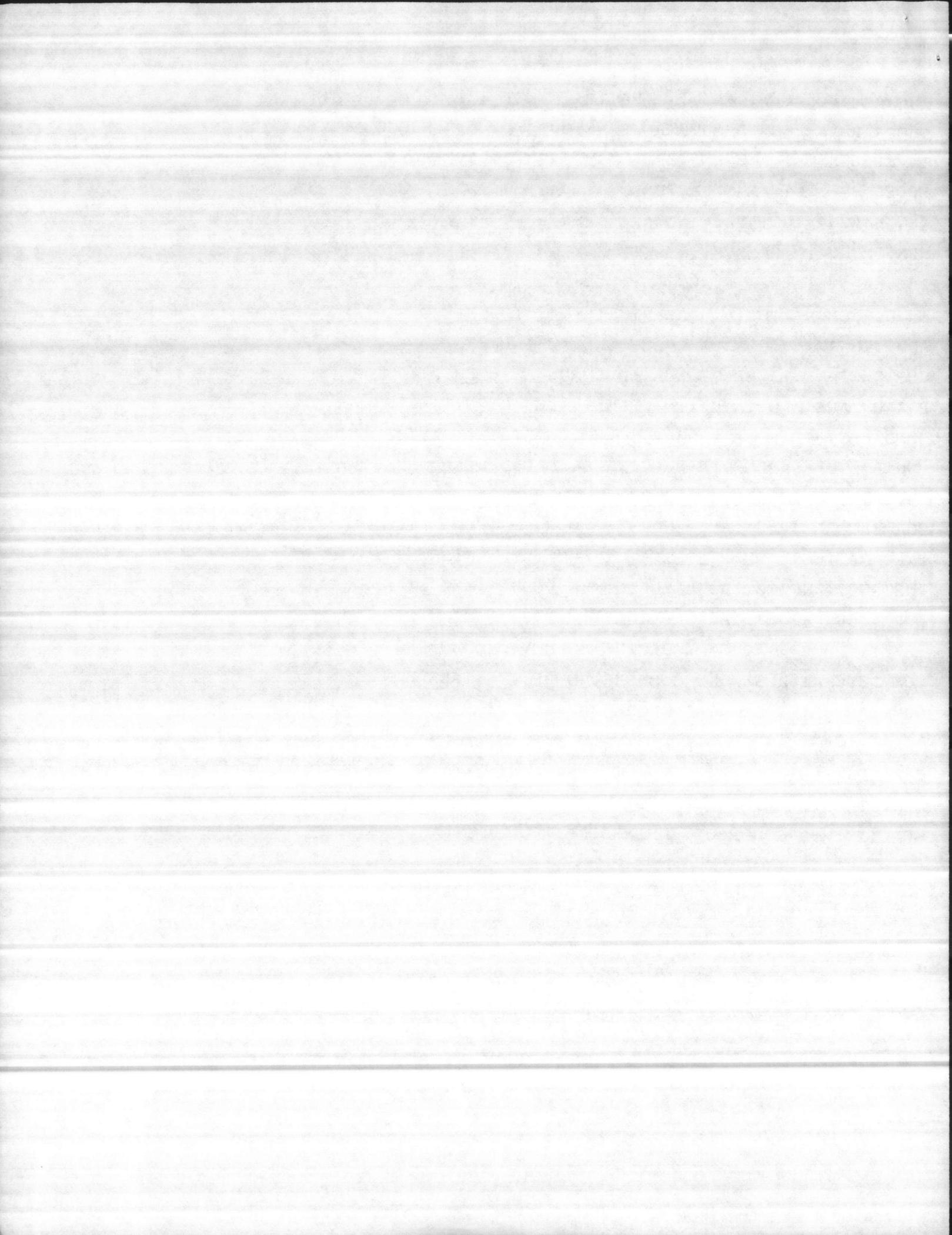
Sincerely,


EUGENE A. MOORE, JR.
Director, Quality Assurance Division
Office of Quality and Contract
Administration

Commander in Chief
U.S. Atlantic Fleet
Naval Facilities Engineering Command
Norfolk, Virginia 23511

Enclosure 1





MAR 14 1986

MEMORANDUM FOR RICHARD HILLYARD
DIRECTOR, CONTRACT MANAGEMENT DIVISION (5FQ)

FROM: EUGENE A. MOORE, JR.
DIRECTOR, QUALITY ASSURANCE DIVISION (FOA)

SUBJECT: Heaters, space NSN 4520-00-555-8696

We have forwarded to you by DHL, a copy of the UL information package on the Patton Electric, New Haven, Indiana space heaters.

In the package is a letter written by UL to Patton, dated April 11, 1986, wherein UL states that it is necessary that Patton's notification and product recall of the subject item (Model MF-12GT), cover all units that were manufactured prior to (the use of) the wire nut construction. This changeover occurred in November 1985.

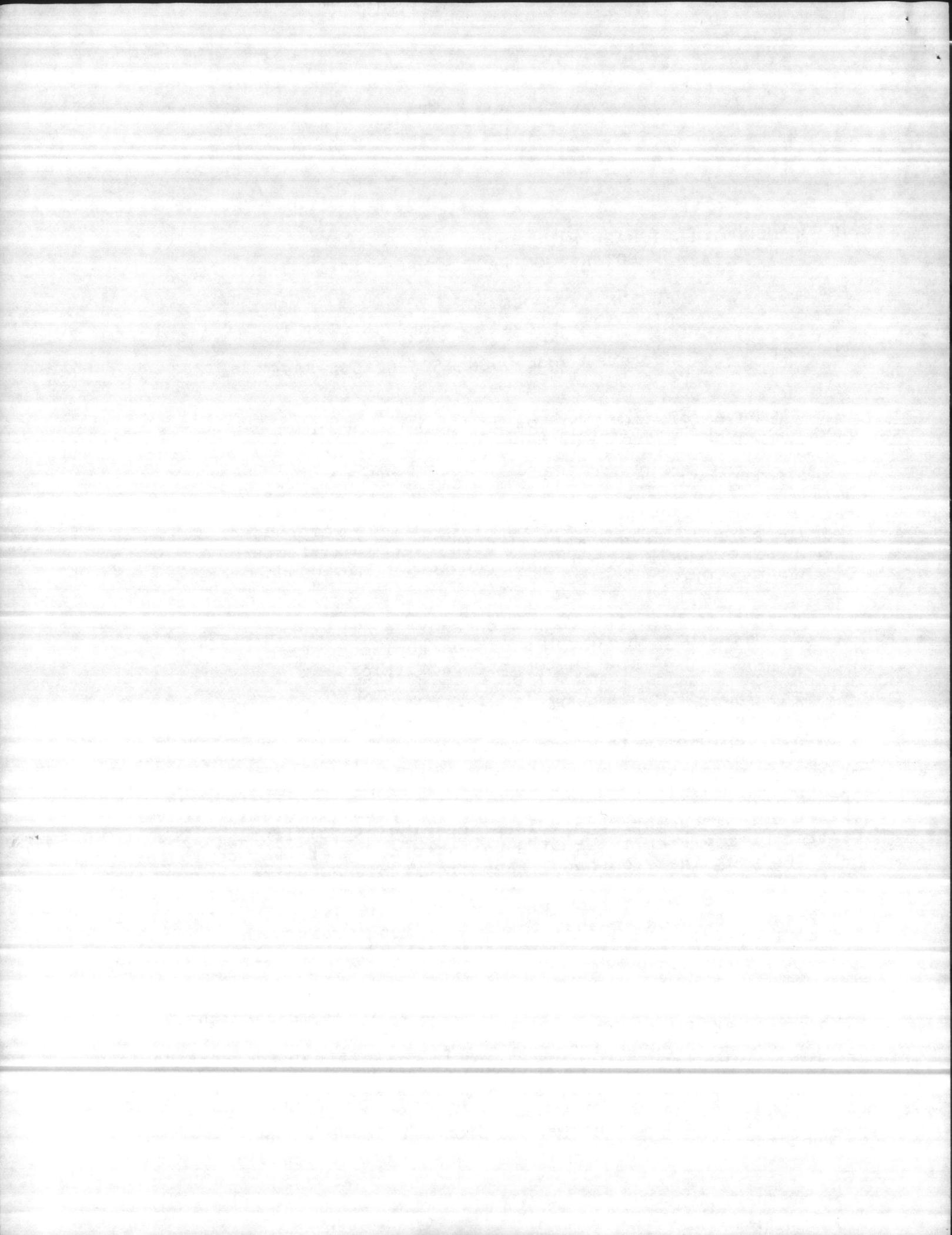
We concur with the UL action and feel that it is adequate. We recommend that the depot stock be replaced first, and then the heaters located at the customers' facilities.

The rework will have to mean the crimp connectors are replaced with 2-wire nut No. 3-0273, and that any flammable plastic housing would be replaced with flame retardant, self-extinguishing plastic.

GSA should insist on a short-time frame for replacement of the heaters. Your QAS should visit the plant frequently to verify that the replacement/repair is proceeding expeditiously. The contractor may need to provide boxes to customers who no longer have the containers on hand. Repaired/replaced units sent to the customers may also need to be specially packed/package to assure safe arrival to the customer, since the units will be returning in onesy-two'sy fashion, rather than in pallet loads to the depots. UL has indicated to this office that they will closely monitor any rework of returned units.

To minimize the confusion of customers, we suggest that Patton include some identifying mark on heaters that use the wire nut construction and which have the fire resistant self-extinguishing plastic housing. The date of manufacture shown on the reworked and replaced heaters should be a new date.

As far as heaters not shipped on open orders under the current contract GS-07F-12318 are concerned, we would prefer that



those orders be terminated. If the termination can't be effected on a no cost basis, then the units might be accepted under the following circumstances:

1. UL continues to list the Model HF-12GT heater.
2. The wire nut connection method is used.
3. The entire housing is constructed of flame retardant, self-extinguishing plastic.
4. The heater complies with all other requirements.

Please keep this office advised of your actions on this matter and coordinate with the Consumer Product Safety Commission Office in your region to keep informed as to what the CPSC is doing.

cc:

A. C. Arterbery (AR)
Richard Annable (5FB)

cc: Official file FQA FQA-D Date
Reading file - FQA B. K. CONGDON
FQ FQC FQA(GHall)
FQA:GHALL:mmw:x77997:5/12/86
REW:EMOORE:mmw:x77997:5/14/86

