

CONTRIBUTOR(S) (Name: Last, first, M.I.)

CONTRIBUTION (Number and title)

DATE RECEIVED

BATES, JOHN L.

117-85 S.O.P. for Filter Changes  
Preventive Maintenance Heat Pumps

6-28-85

85-117

POSITION TITLE, AND GRADE OR RANK/RATE

ACTIVITY OF CONTRIBUTOR(S) (Name and location)

Maintenance Worker, WG-8

MCB, Camp Lejeune, N.C. 28542

ORGANIZATIONAL CODE AND TITLE

Base Maintenance Division

TO:

DATE FORWARDED

DUE DATE

Base Maintenance Officer

28 June 1985  
Resubmitted 16 OCT 87

30 OCT 87

A complete evaluation of this contribution is necessary, and all questions that apply should be answered. Although you may not have authority to implement the contribution, you are requested to give your opinion on its value. Do not merely state that authority to adopt the contribution is under the cognizance of GSA, VA, Treasury, etc. YOUR REPLY MAY BE USED VERBATIM IN NOTIFYING THE CONTRIBUTOR(S) OF THE RESULTS.

SIGNATURE OF AWARDS ADMINISTRATOR

ACTIVITY AND LOCATION

Donald L. Smythe

Civilian Personnel Division  
MCB, Camp Lejeune, N.C. 28542

INVESTIGATION REPORT

YES NO

- 1. WILL CONTRIBUTION BE ADOPTED LOCALLY? (If "NO" give reason for nonadoption in space 4 and answer questions 5 and 6 only) YES  NO
- 2. IS CONTRIBUTION IN OPERATION? (Complete items below) YES  NO

IF "YES" GIVE DATE INSTALLED \_\_\_\_\_ IF "NO" INDICATE BELOW THE ACTION TAKEN TOWARD ADOPTION

- COMMITMENT TO ADOPT HAS BEEN MADE
- PROJECT OR JOB ORDER HAS BEEN ISSUED
- EXPERIMENTAL WORK OR TRIAL TEST IS UNDER WAY
- APPROVAL HAS BEEN REQUESTED

3. ESTIMATE OF BENEFITS

A. INTANGIBLE BENEFITS

- VALUE  MODERATE  SUBSTANTIAL  HIGH  EXCEPTIONAL
- EXTENT OF APPLICATION  LIMITED  EXTENDED  BROAD  GENERAL

B. TANGIBLE BENEFITS (In table below compute labor savings at actual cost.)

ITEM	LABOR			MATERIAL			TOTAL (LABOR AND MATERIALS)
	Hours Per	Dollars Per Hour	TOTAL	Units Per	Cost Per Unit	TOTAL	
FORMER METHOD		\$	\$		\$	\$	\$
NEW METHOD							
SAVINGS							

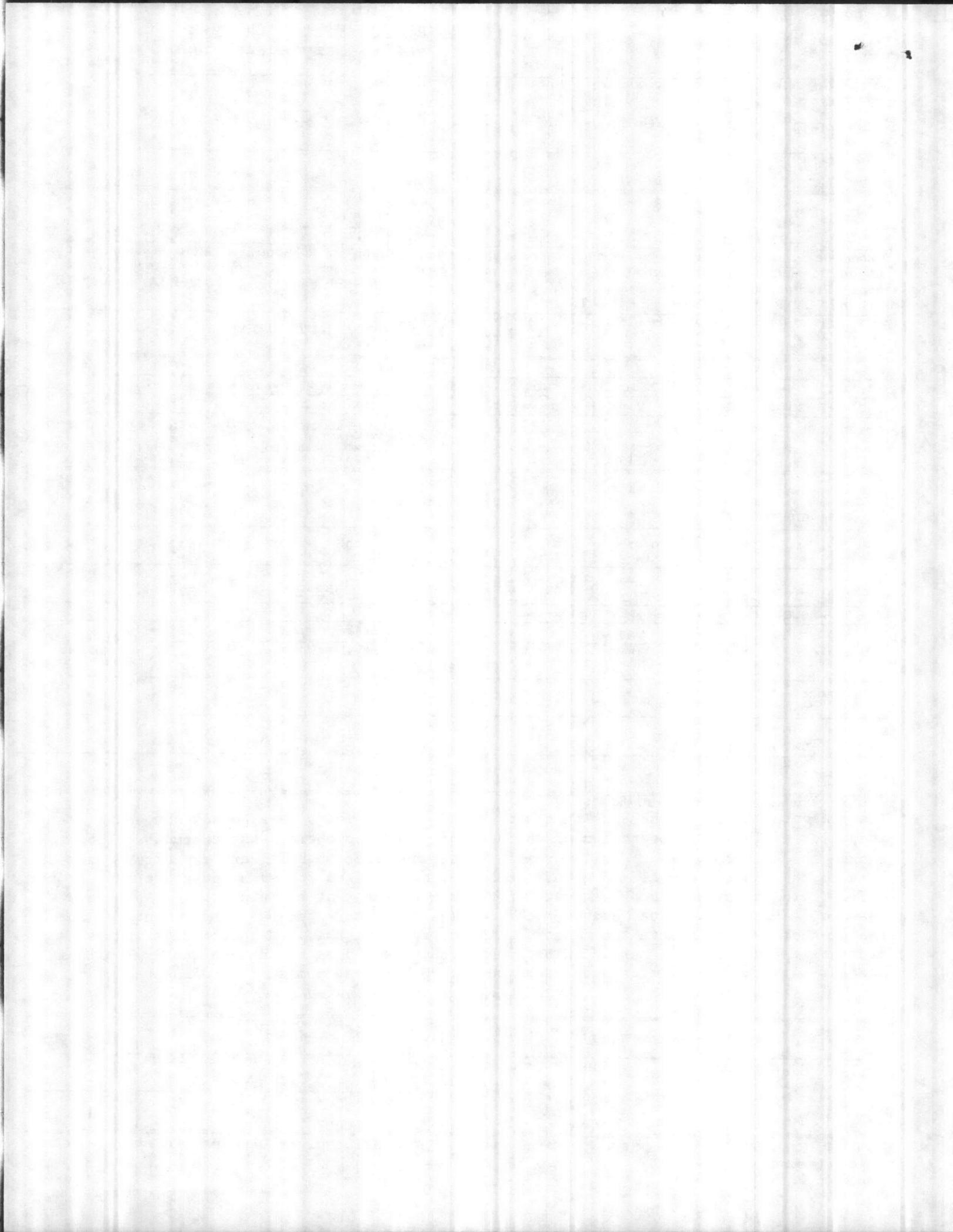
4. ADDITIONAL INFORMATION AND COMMENTS

The present policy of Base Housing now is when a tenant moves in a house, a housing inspector explains the operation of the heat pump, how to operate the thermostat, how to change the filter, where to call for maintenance and that when filters are dirty, they can come to the Housing Office and get filters; a list of sizes for each house are kept at the office. In addition, a booklet is given to each tenant that explains this. As a safety measure, a ticket is issued each quarter to replace filters because many tenants do not change them or they remove the filters without replacing them. Manufacturers suggest annual preventive maintenance servicing be done on the heat pumps to include washing coils if needed. A ticket is written once each year to PM the heat pumps. If coils are not dirty,

(If more space is needed, use reverse side starting with this end of the page up.)

5. IS PATENT INVESTIGATION RECOMMENDED?	YES	NO	SIGNATURE OF INVESTIGATOR <i>Jesse L. Sellers</i> Jesse L. Sellers, Dir., M&R	DATE 11-18-87
				ACTIVITY AND LOCATION OF INVESTIGATOR BASE MAINTENANCE DIVISION
6. IF CONTRIBUTION CAN BE USED ELSEWHERE, INDICATE WHERE:			APPROVING OFFICIAL M. G. LILLEY	DATE

Encl (1)



once every three years is not often enough. Each shop  
maintenance manual for each type of equipment it services and  
shops are supposed to follow these manuals for their yearly PM's.  
manuals are not available, it is the responsibility of the super-  
and see to it that they are followed.

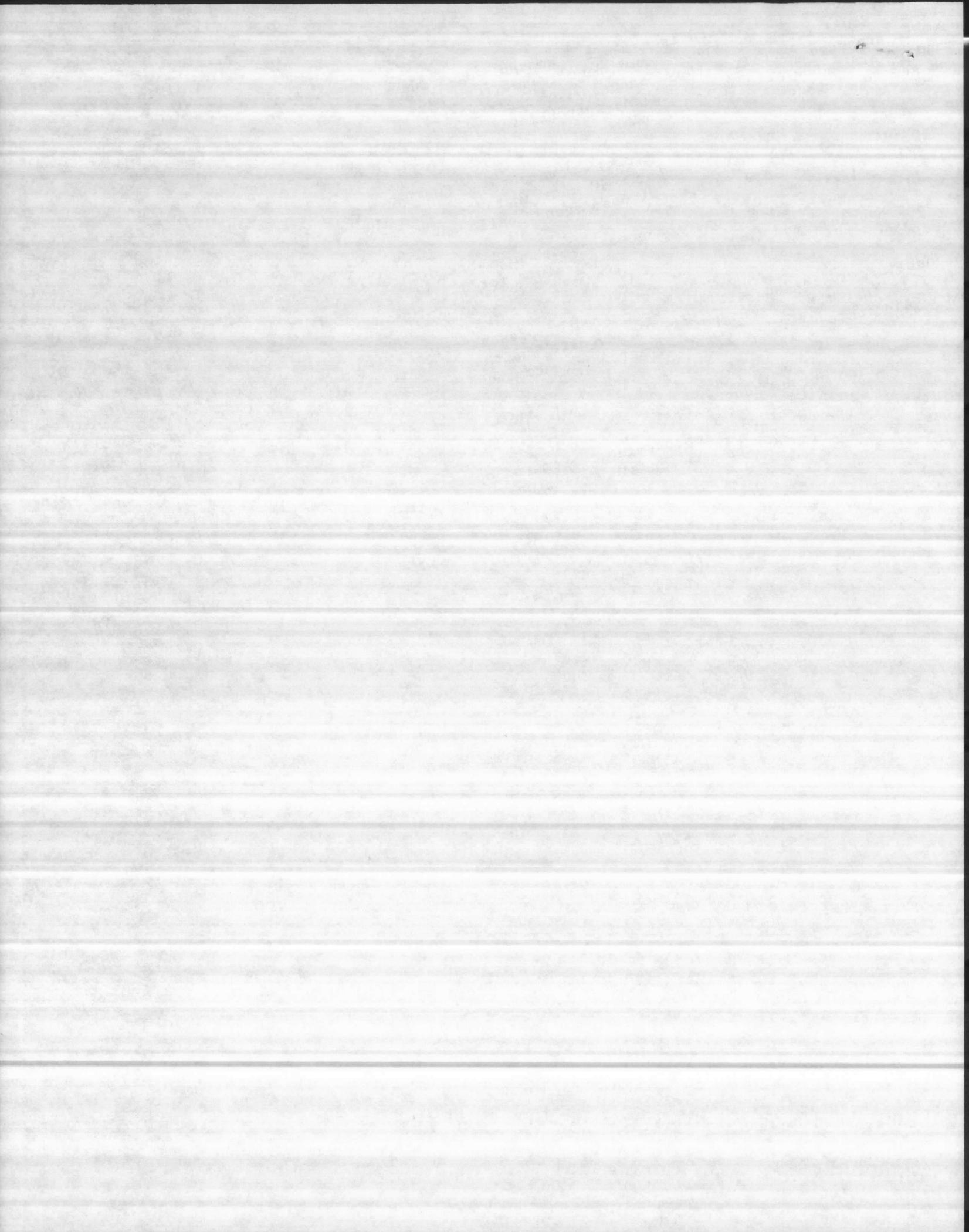
the best time to PM units is when tenants move out and the house is  
s, however, stay more than one year. In many instances when the  
e service personnel are swamped with emergency calls.

get in a house to PM the unit because the tenants work or are  
ct Base Housing, and they can make arrangements for him to get

s contained in the suggestion are covered by present policy, if  
is felt that the present policy is adequate and that PM's to  
each year instead of every three years as recommended in the

the suggestion not be adopted.

ed for his interest in the improvement of Command operations  
inue participation in the Beneficial Suggestion Program.



NAME (last, first, m.i.) JONES, John L.	POSITION TITLE & GRADE (or military rank/rate) WG-8 (step 02) Maintenance Worker	SOCIAL SECURITY NO. [REDACTED]
ORGANIZATION (Specify activity, ship, command, bureau or office) MCB Camp Lejeune, N.C.	ORGANIZATION SUBDIVISION (Dept., Div., Sect., Unit or Shop) Facilities Dept., Maintenance Div., M & R Branch, Emergency Services Sect.	PHONE 451-2781
I (WE) UNDERSTAND that the acceptance of a cash award for the use of this suggestion by the United States Government shall not form the basis of a further claim of any nature upon the United States by me (us), my (our) heirs, or assigns.		DO NOT WRITE IN THIS SPACE DATE RECEIVED 6/28/85
SIGNATURE AND DATE John L. Jones 5-29-85	SIGNATURE AND DATE	SUGGESTION NUMBER 117-85

**TITLE OF SUGGESTION**  
 S.O.P. for filter changes and preventive maintenance of heat pumps

Describe in three separate paragraphs (1) the problem, difficulty, or circumstances that prompted you to submit this suggestion; (2) the suggested change; (3) where and how it can be used, what it will accomplish, and how it will benefit the Navy/Government - in terms of tangible savings, if possible.

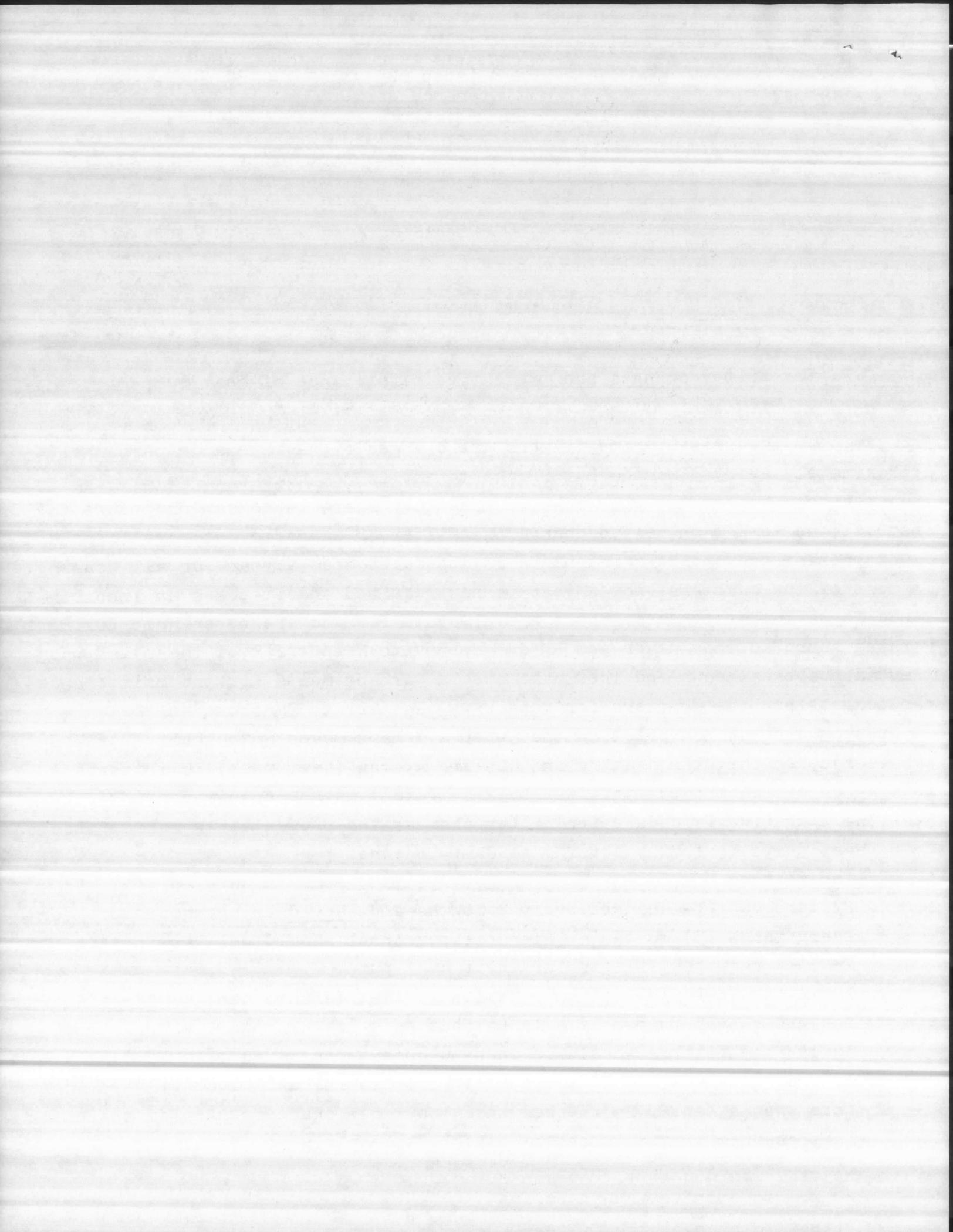
**Problem:** At the present time filters are changed by maintenance personnel approximately every 3 months but if the tenant is not home filters are left in hopes that the tenant will make the change. There is no set procedure to instruct the tenant on how to change the filter or where to get more if needed.

At present preventive maintenance is scheduled once a year for all housing. In most of the quarters once a year is not required and it poses an inconvenience for a lot of tenants, there are always a few who are never home during working hours so they never get PM'd. We try to keep track of these and when they have a break down and they make special arrangements for the maintenance man to get into the quarters for repair we also try to PM those at that time.

It should be common practice that when a tenant moves into their quarters they can be assured that the heating and cooling system (heat pump) is in perfect working condition and put that way by a competent maintenance man.

**Recommendation:**  
 Standing Operating Procedure for filter changes and preventative maintenance of heat pumps in family housing at Camp Lejeune.

1. Filter changes.
  - A. Filters must be changed every 3 months and should be changed every month.
  - B. Every three (3) months, maintenance personnel should deliver to each tenant the required filters for their heat pump.
  - C. There should be a location established that tenants can acquire filters for their heat pump. If a tenant has pets (cats, dogs living inside house) the filters should be changed once a month.
  - D. It should be the tenant's responsibility to install clean filters, therefore when a tenant is checked into their new quarters part of the check in procedure by the inspector must be to explain to the tenant:
    1. how the heat pump works
    2. how to operate the thermostat
    3. how to change the filters



5-29-88  
for filter change and P.M. of heat pumps c'd.

4. where to get more filters if needed
  5. how often new filters will be delivered
  6. how to report problems with heat pump
- E. It should be SOP, that everytime maintenance makes a service call (repair) for a heat pump that the filter be checked and if needed changed.

#### Preventive Maintenance of heat pumps

- A. P.M. of heat pumps should be accomplished at least once every three years in most cases.
- B. This can be accomplished in most cases when the house is empty, on tenant transfers.
- C. When transfers occur the checkout inspector should write a ticket for heat pump PM with a COB date.
- D. A record must be maintained at each maintenance shop or at housing control on a 3 year schedule and at the end of the 3 year period those units not PM'd because of no transfer, a PM ticket issued while tenants are in quarters.
- E. The PM should consist of, but not limited to
  1. change filters
  2. clean, with coil cleaner the indoor and outdoor coil
  3. check all electrical connections
  4. check heat strip operation
  5. oil indoor fan motor if able
  6. check defrost operation
  7. check pressures, high and low for the season that the PM is accomplished.
  8. check the thermostat for proper functioning and control
  9. check overall operation for season

#### 3. Records and instruction

- A. Each tenant should be given a set of written instructions on their heat pump; example, how to change filter, when to change filter, how to work the thermostat, and how and who to call for repair and where to get new filters.
- B. Records kept in a log book and maintained recording each time the unit was PM'd. This would require a yearly review to determine PM's due with tenants in quarters.

It is simply impossible to figure the savings of this plan over the existing plan. I use the above plan in my home and I recommend it if you have a heat pump. You will enjoy a care free, climate control home with a heat pump that last many years, as is intended by the manufacturer.

