

Due by 4/21

FILE

5. Controlling project material after job order is completed

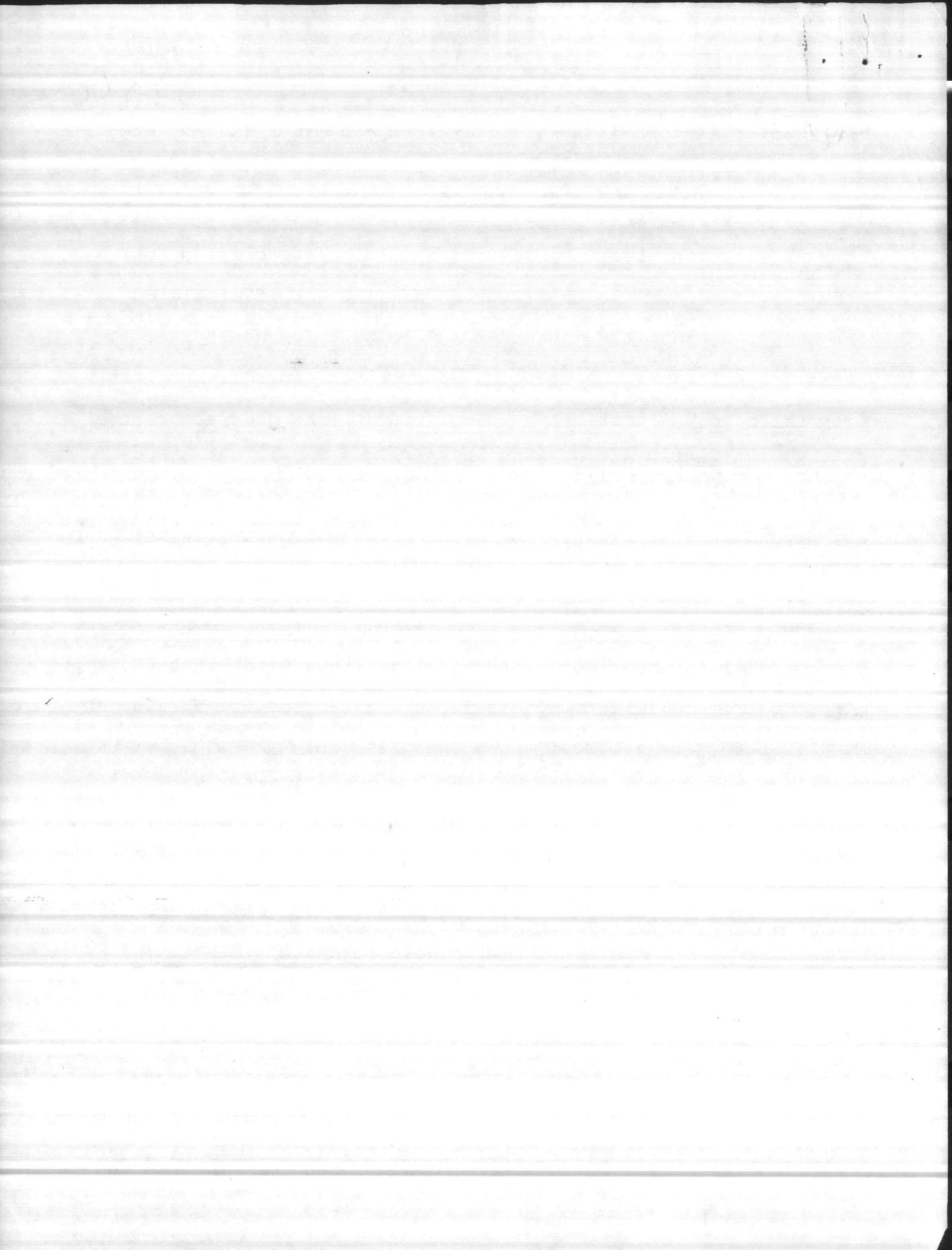
a. Materials accumulated for projects are being issued after the job order for which the material was required and charged was completed. Procedures should be established to return system items to shop stores when the job is completed for credit against the job order and account for non-system items. The issuance of material after a job order is complete, overstates actual cost of the completed job and understates the cost of the job actually using the material.

b. Review of 59 completed job orders for which material was accumulated (projects) showed that on 25 projects, 83 line items valued at \$2,118.96 were issued from 11 to 96 days after the job order was completed or cancelled.

(1) A comparison of the 83 line items with Direct Support Stock Control (DSSC) stocked items showed 39 line items valued at \$1,035.66 were stocked. Some examples are:

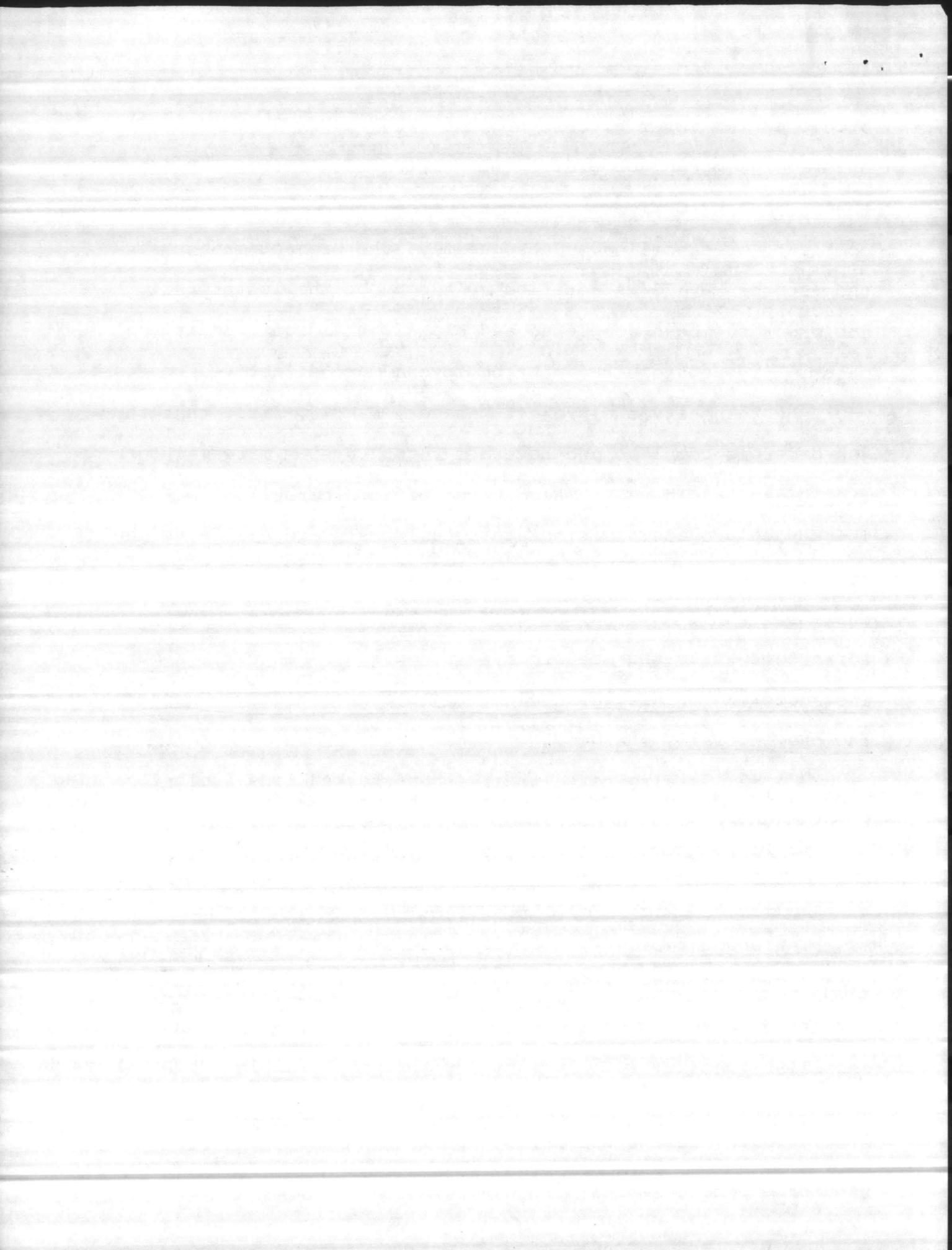
<u>Project Number</u>	<u>Date Complete</u>	<u>Date Mat'l Issued</u>	<u>NSN and Nomenclature</u>	<u>Quantity Issued</u>	<u>Unit</u>	<u>Cost</u>	<u>Amount</u>
4074	9-30-77	11-09-77	4130-00-C00-6723 Filter, A/C fiberglass	188	ea.	\$.69	\$129.72
4087	9-30-77 (Cancelled)	10-18-77	5620-00-223-2351 Glass clear win- dow, double strength	300	ea.	.35	105.00
3246	11-18-77	12-07-77	6145-00-112-8627 Cable, power elec., 3 conductor	250	ft.	.07	17.50
4035	10-21-77	11-15-77	8030-00-007-4518 Glazing compound, sash	64	qt.	1.74	111.36

MCO P11000.7A, par. 4080.3c, states materials in excess of that required for a specific job shall be returned to shop stores for



credit to the material cost of that job. Under current procedures for closing job orders the Maintenance Officer notifies the Accounting Officer by letter on the status of the job order, completed or cancelled. Subsequently, the project manager in shop stores, MLV 75, is notified by a copy of the letter that the job order has been completed and closed, indicating additional material is not required. We believe a more effective procedure would be to notify the project manager, MLV 75, first that the job order is complete and have him return system material for credit and then have the Accounting Officer close the job order. This procedure would accumulate actual costs and eliminate the need to reopen job orders for material credits. We found instances where material stocked by shop stores was returned for credit after the job order was complete. However, in most instances the credit was against a job order which was open rather than the one initially charged.

(2) We also noted that 44 non-stocked line items totalling \$1,083.30 were issued after job orders were closed. This material cannot be returned for credit, consequently, the job order is charged for the material. Presently there is no system for material accountability after it is issued. If the material is used on a subsequent job order, it is issued without charge, resulting in an understatement of job order cost. MARCORB should establish procedures to account for this material, in a central location, so it can be systematically used on subsequent jobs, with material cost being charged to the job order the material was used on. Some examples of non-stocked material drawn are:

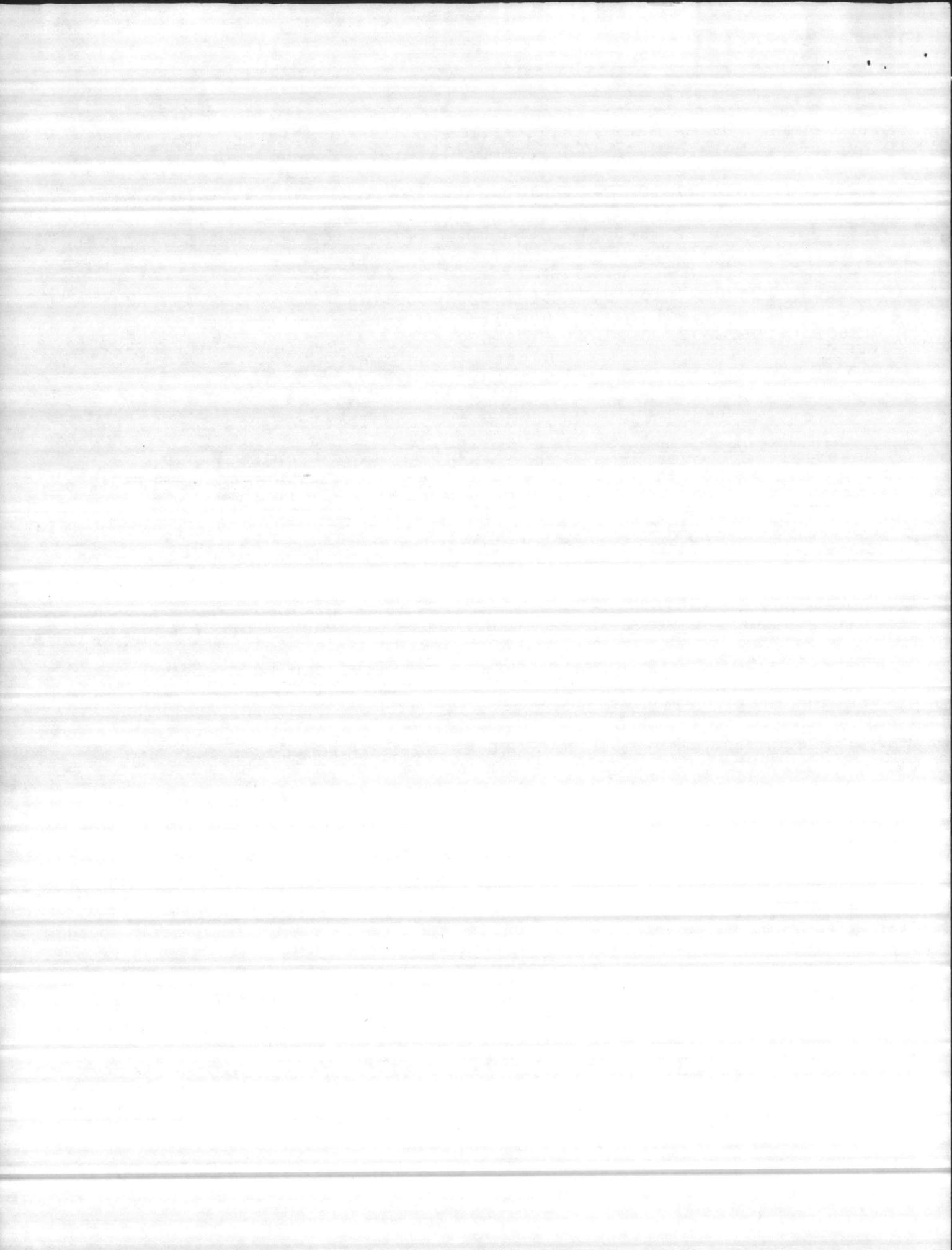


<u>Project Number</u>	<u>Date Complete</u>	<u>Date Mat'l Issued</u>	<u>NSN and Nomenclature</u>	<u>Quantity Issued</u>	<u>Unit Cost</u>	<u>Amount</u>
2578	9-16-77	10-11-77	6140-C99-6297 Excide cell filter	1	\$175.00	\$175.00
4353	5-11-77 (Cancelled)	6-09-77	5640-00-551-3506 Insulation, pipe 1-1/2	36	3.55	127.80
4060	9-30-77 (Cancelled)	10-19-77	5640-C99-6308 Paneling, masonite	5	8.45	44.75
2653	9-23-77	10-25-77	6120-C99-6655 Cluster mounting bracket	2	29.45	58.90

c. We found that the two most prevalent reasons for having material left over from a completed job were, material estimated and not required or secured elsewhere, and material not received in time through the supply system and a duplicate order procured through open purchase.

Recommendation 15. MARCORB revise procedure for closing specific job orders so material not required can be credited to the job order prior to closing.

Recommendation 16. MARCORB establish procedures for accounting for non-stocked materials not required on completed specific job orders.



6. Making uneconomical repairs to an unauthorized vehicle

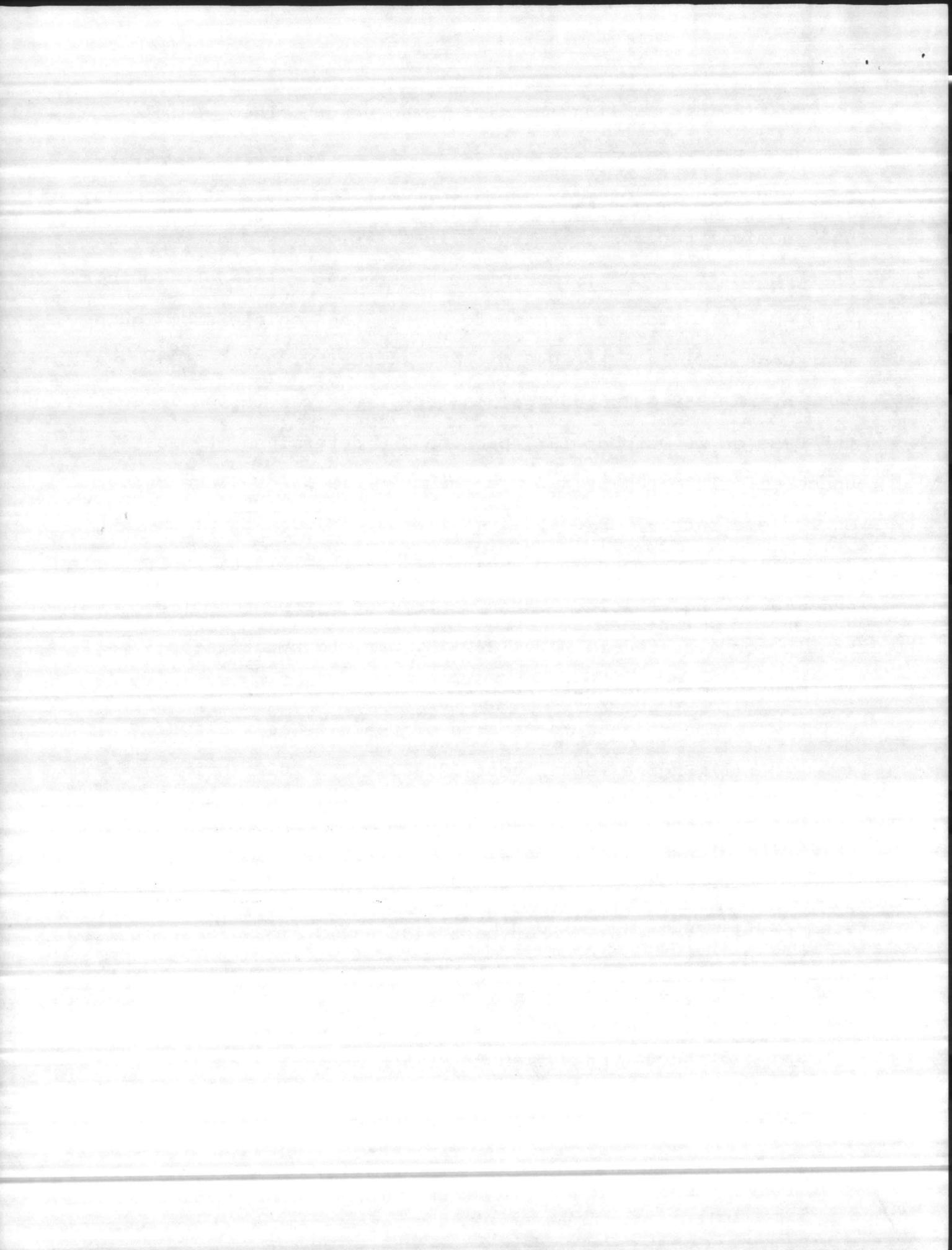
a. BMD received a 5,000 gallon tank truck from the Defense Property Disposal Officer (DPDO) without CMC approval and made uneconomical repairs totaling at least \$2,821. Costs were charged to five JON's, four of which are not related to vehicles. Also, modifications were made to change the vehicle from Equipment Code (EC) 1415 to 3046 without authority.

b. A 1959 GMC 5,000 gallon tank truck was turned in to the DPDO on 20 October 1977 because CMC determined it was uneconomical to repair and met the criteria for replacement. On 22 November 1977 BMD received this vehicle, without CMC approval, and proceeded to expend at least \$3,613 to repair and modify the vehicle. These costs exceed the economical repair costs stated in MCO 11240.75, par. 6d by at least \$2,821. We found that these costs were charged to five JON's, four of which were not related to repairs of vehicles as follows:

(1) Engine repair cost \$2,383 - JON 2022 (Maintenance and repair to miscellaneous ground maintenance equipment for which individual repair costs are not required).

(2) Modifications, by plumbing shop, to change vehicle from EC 1415 to 3046 - labor cost \$496 - JON 3119 (Indirect support includes pay of personnel assigned to Work Management Branch, shop clean up and consumable supplies).

(3) Labor charges to paint the vehicle - \$734.



<u>JON</u>		<u>Man- hours</u>	<u>Cost</u>
4715	Performing recurring carpenter maintenance to barracks	16	\$162
4023	Paint and refinish floors in BOQ Apt. 2607	16	162
<u>/1</u> 2577	Paint vehicle number 201239	40	410

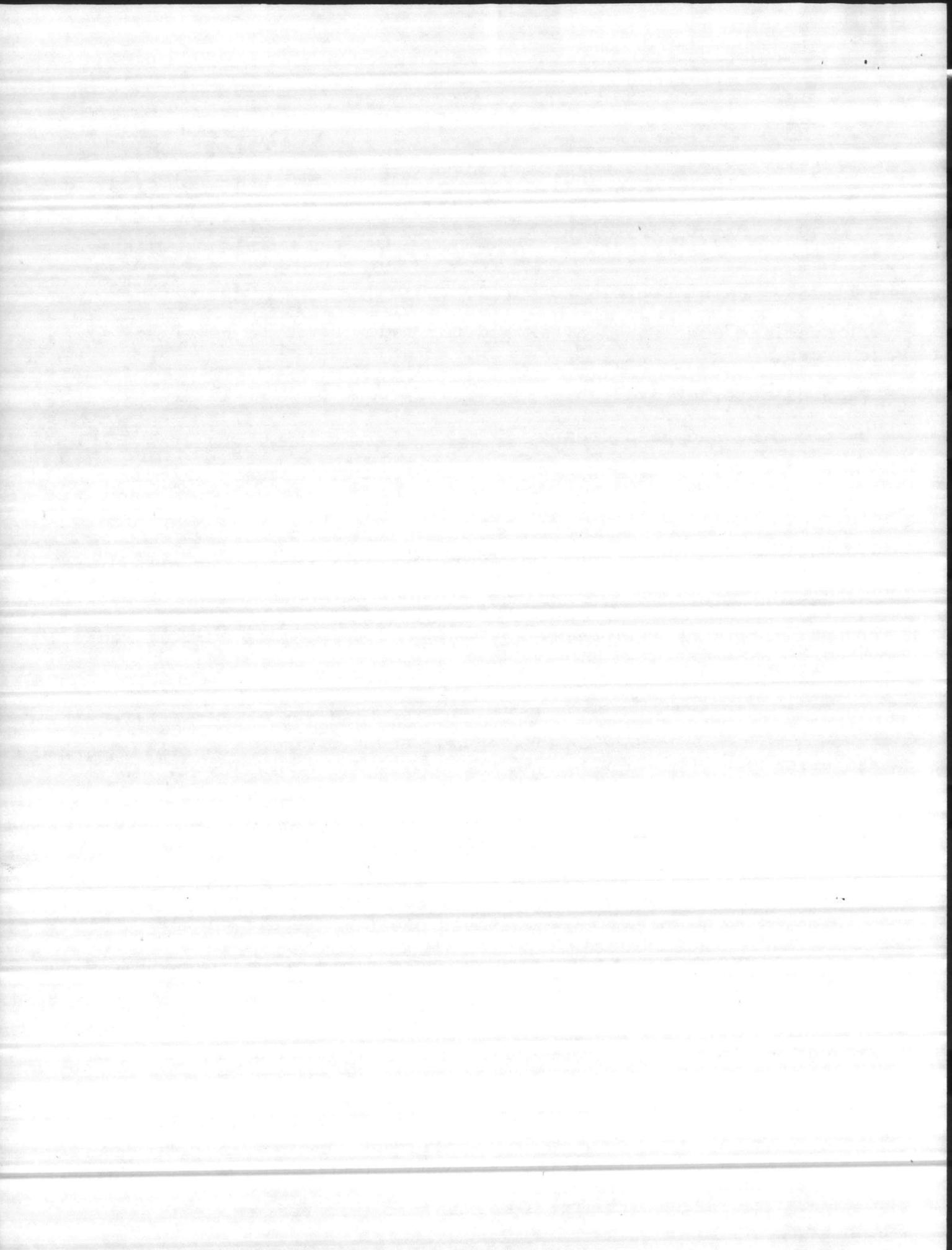
/1 Specific JON issued after Auditor made inquiries about labor charges.

Records were not available to identify cost of materials used by plumbing and paint shops.

c. BMD submitted a request to CMC on 21 February 1978 to increase their Table of Equipment (T/E) by one vehicle, EC 3046, and change the above vehicle from EC 1415 to 3046. As a result of actions stated above BMD has, without authority, (1) obtained a vehicle not on their T/E; (2) changed a vehicle's EC; (3) made uneconomical repairs; (4) a vehicle in use which has been dropped from CMC's master inventory; and (5) charged labor and materials to erroneous JON's.

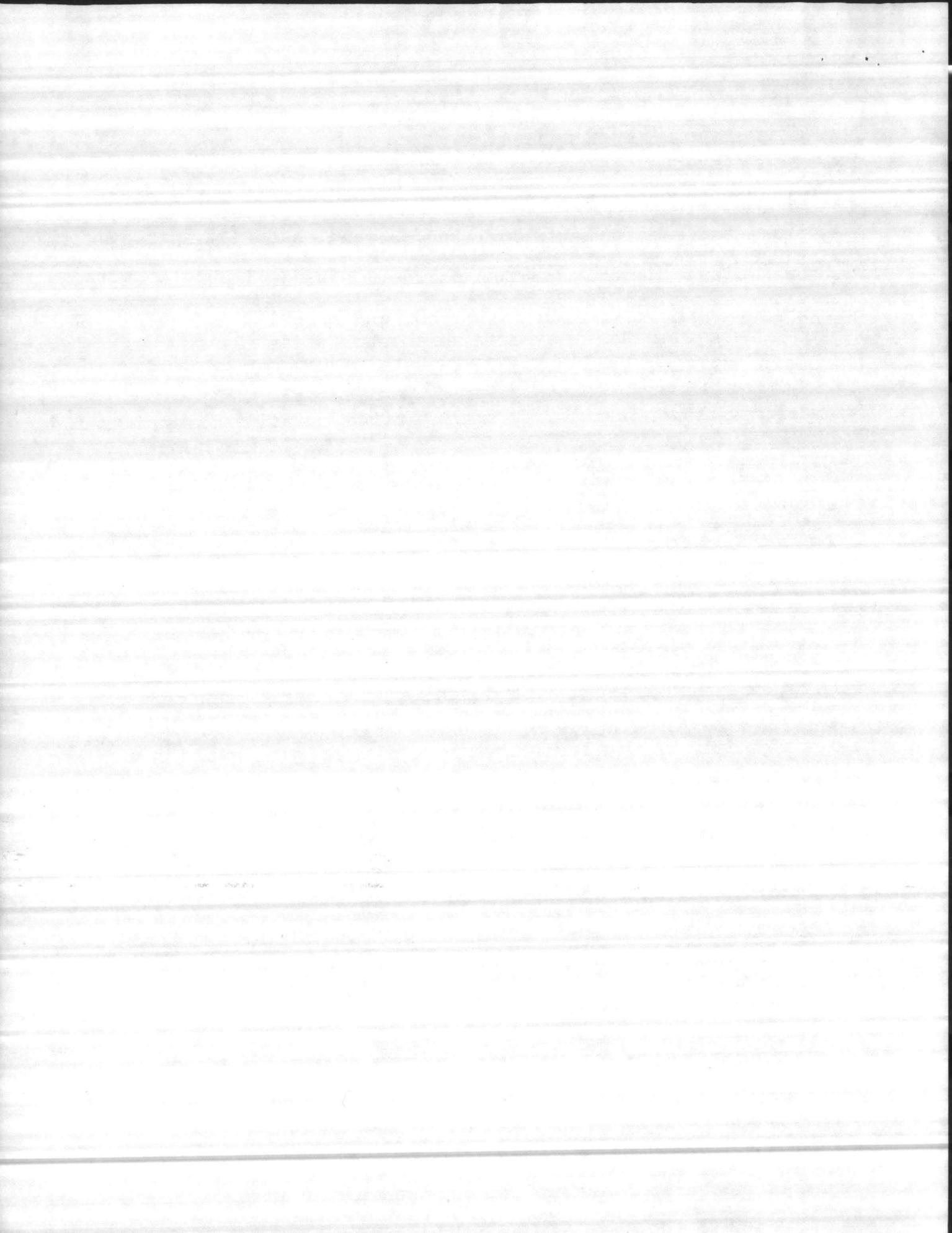
d. MCO 11260.3B, par. 3a outlines procedures for establishing and increasing allowance for mobile engineer equipment. MCO 11240.75, par. 5c defines criteria for uneconomical repairs. Paragraph 6d requires that whenever one time repair cost is 50 percent or more of the current wholesale value of the vehicle, it shall be reported to CMC for a determination to replace or authorize repairs.

Recommendation /1/. MARCORB request and receive approval from CMC prior to increasing its existing allowances of equipment, as required in MCO 11260.3B, par. 3a(1).



Recommendation 18. MARCORB report equipment to CMC for a determination as to whether repairs will be made to a piece of equipment when one-time repair costs exceed limits outlined in MCO 11240.75, par. 6d and MCO 11260.3B, enclosure (3), par. 6.

Recommendation 19. MARCORB charge JON's applicable to work being performed and include all labor and materials charges.

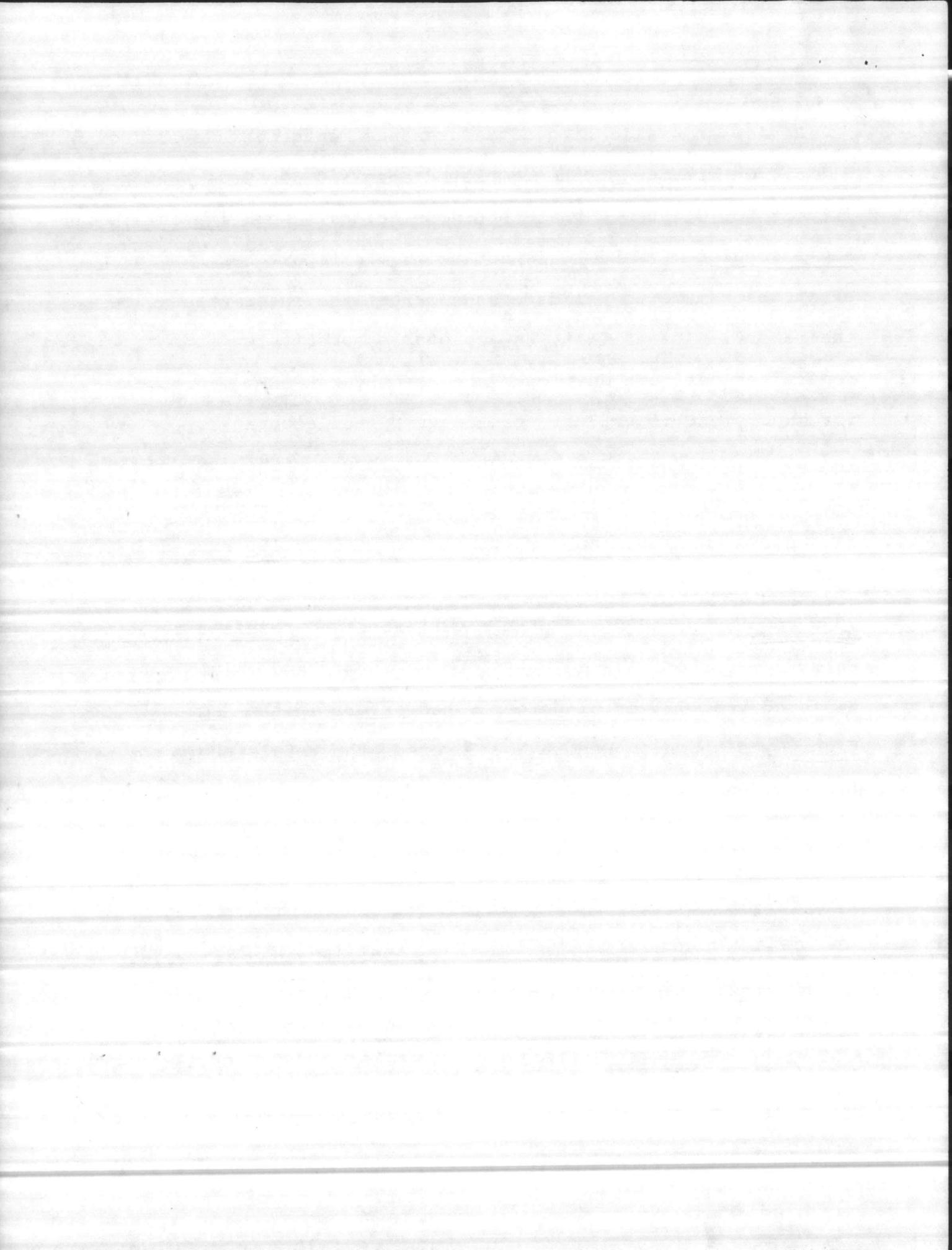


7. Review and validation of Maintenance Management Report No. 3

a. Our review of the Completed Specific Job Order Report (Report No. 3) showed that the information is both inaccurate and incomplete. MARCORB is not using the report nor has an effort been made to validate and correct the information on the report. In addition, an acceptable substitute for the report has not been developed and used by MARCORB. In order for management to evaluate the adequacy and accuracy of estimates and performance against estimates, various reviews must be made.

b. We reviewed Report No. 3 for December 1977 which contained 676 completed job orders and found only 180 exceeded \$600 in total cost. Based on the data on the report 142, or 79 percent, exceeded acceptable variances and required review. We reviewed those 142 in detail for accuracy and completeness. We found that 72, or 51 percent, had errors in the "actual figure" as shown on Report No. 3 versus the totals shown on the Fund Administrator Expense Report (FAER). Examples are as follows:

<u>JOS</u>	<u>Man-hours</u>	<u>Material Cost</u>	<u>Total Cost</u>
<u>0429</u>			
Report No. 3	207	\$ 537.08	\$ 2,856.64
FAER	191	565.43	2,525.78
<u>4034</u>			
Report No. 3	3,684	6,428.77	40,528.28
FAER	3,232	5,229.49	36,133.93
<u>4691</u>			
Report No. 3	901	1,820.56	10,912.27
FAER	605	983.93	7,078.88



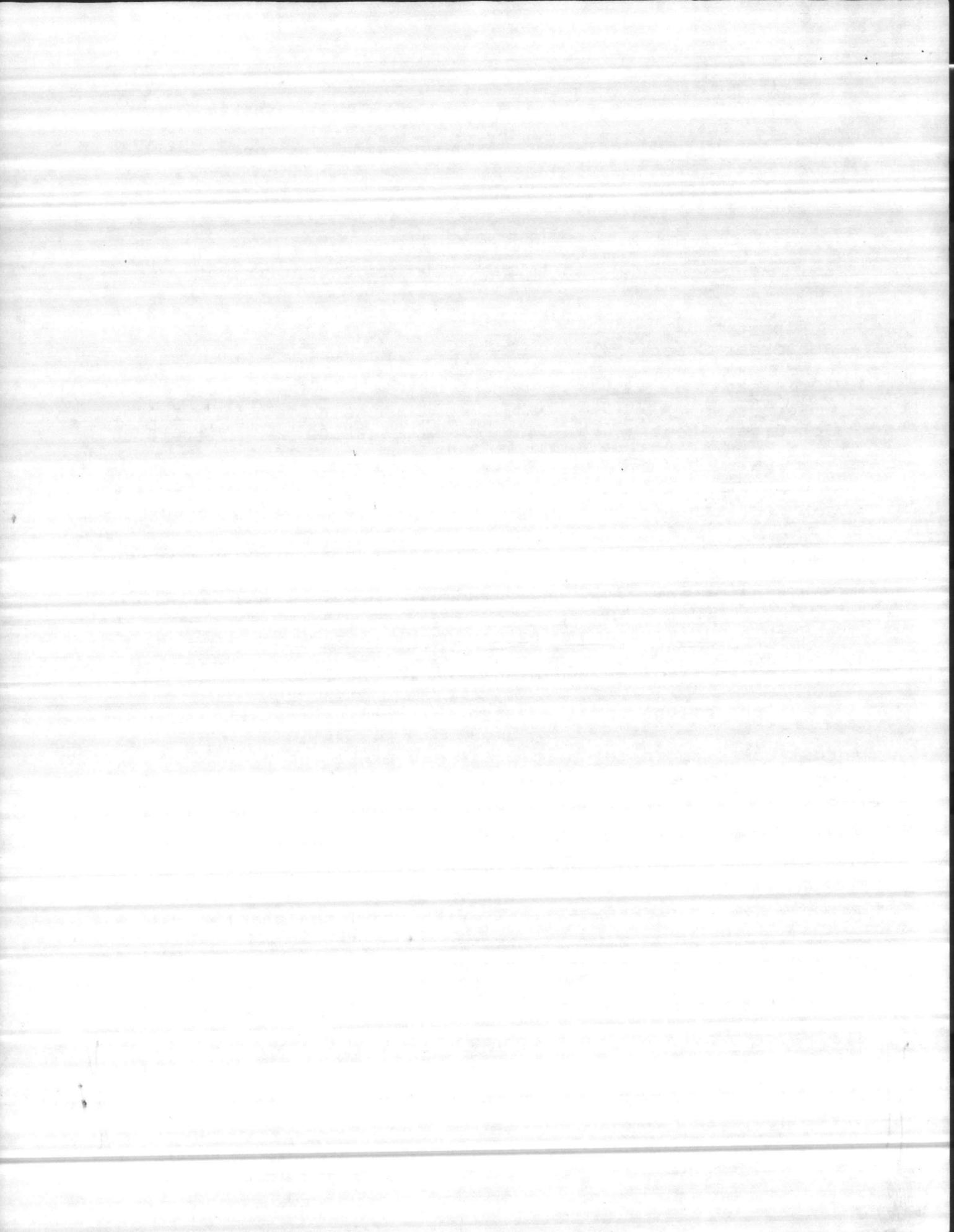
We also reviewed the estimates as shown on Report No. 3 in comparison with those shown on the original job order and found 87, or 61 percent, were not in agreement. Some examples are as follows:

<u>JOS</u>	<u>Man-hours</u>	<u>Material Cost</u>	<u>Total Cost</u>
<u>2638</u> Report No. 3 Job Order Sheet		\$ 801.00 832.00	\$ 1,048.00 1,195.00
<u>3547</u> Report No. 3 Job Order Sheet	274 343	368.00 468.00	3,200.00 4,010.00
<u>4035</u> Report No. 3 Job Order Sheet	960 786	807.00 878.00	9,872.00 7,995.00

It should be noted that of the 87 job orders on which the estimates did not agree, 57 had amendments. Out of the 57 with amendments, 40 were dated after the completion date of the job. This problem is discussed elsewhere in the report.

c. MCO P11000.7A, par. 5030.2c, requires that when the actual costs shown for a specific job order serial number exceeds \$600 and the "total" entry for the line item headed "% Est/Act" indicates a plus or minus variance of at least 15 percent or 80 in the number of man-hours or at least 10 percent in the cost of materials, the reason for the variance shall be explored. Report No. 3 currently includes all specific job orders completed during the period regardless of cost or variances. We believe the report would better serve its intended purpose if only job orders over \$600 which exceed one or more of the prescribed variances were printed. Also, the print routine should be changed to include more than one job order per page. These

Agree



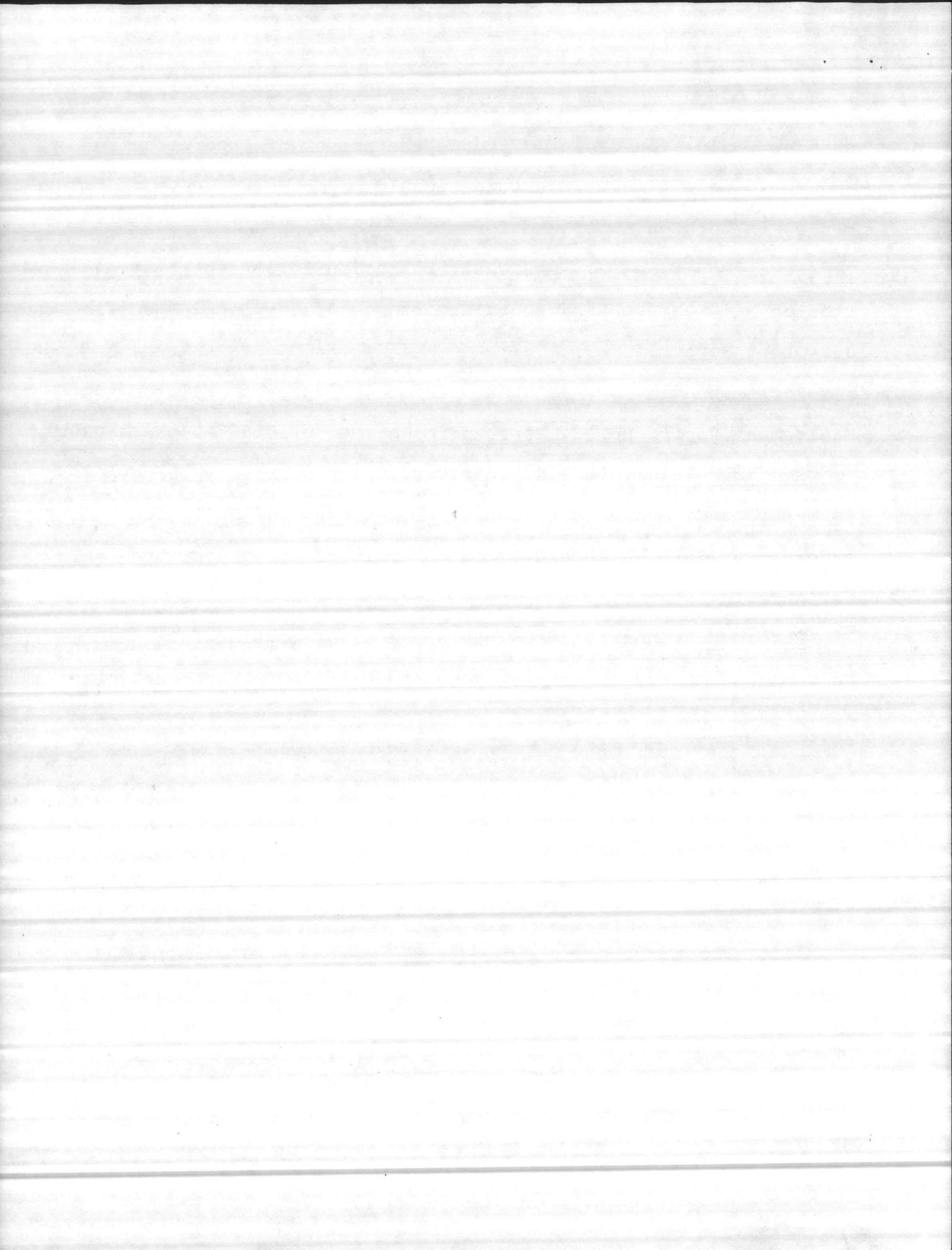
changes would significantly reduce the amount of paper required and would result in a report that would be more conducive to review in both quantity and format.

Recommendation 20. MARCORB take action to correct information on Maintenance Management Report No. 3, Completed Specific Job Order Report.

Recommendation 21. MARCORB review variances on Maintenance Management Report No. 3, as required by MCO P11000.7A, par. 5030.

Recommendation 22. CMC consider making necessary changes to Maintenance Management Report No. 3 to include only job orders over \$600 which exceed one or more of the prescribed variances.

Recommendation 23. CMC change the print routine for Maintenance Management Report No. 3 to print more than one job order per page.

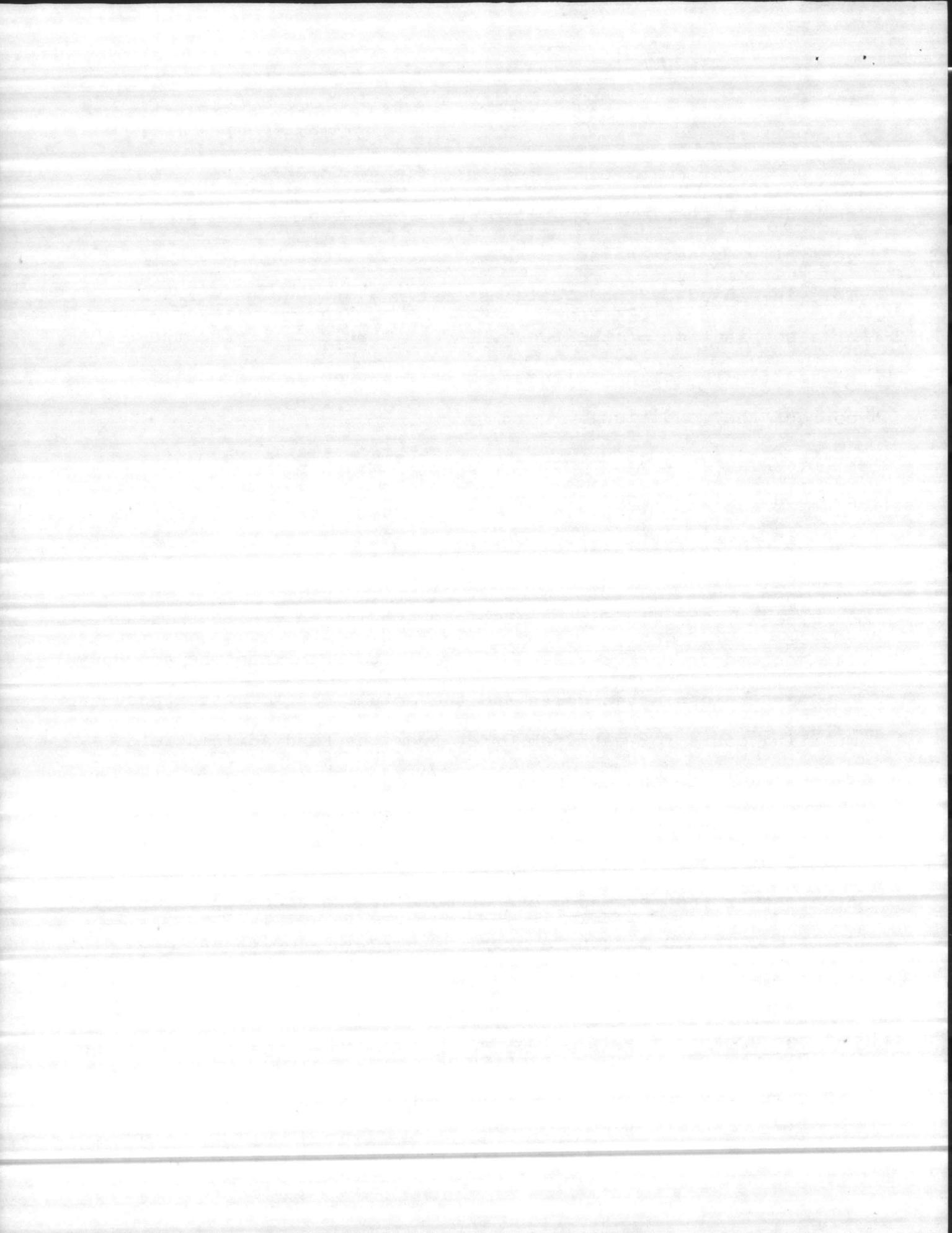


8. Determining the accuracy of estimates or the efficiency of performance

a. A review of completed specific job orders over \$600 showed that the level of performance required to complete jobs generally exceeds an acceptable variance from what was estimated. This is caused by inadequate estimating, inadequate performance, or a combination of the two. MARCORB should determine the reason for the high variance and take appropriate steps to correct the condition.

b. A review of Maintenance Management Report No. 3 for the month of December 1977 showed that 180 job orders exceeded \$600 in total cost. Based on the data on Report No. 3, 142 job orders should have been reviewed by BMD because of excessive variances. This is discussed elsewhere in the report. These 142 job orders were reviewed in detail to determine the accuracy between the estimated costs and the actual costs. After accumulating costs for each job order from the Fund Administrator Expense Report, and estimates including amendments prior to and subsequent to the completion of the job, a comparison was made. We found that 124, or 69 percent, of all specific job orders over \$600 exceeded one or more of the acceptable variances described in MCO P11000.7A, par. 5030.2c. Examples are as follows:

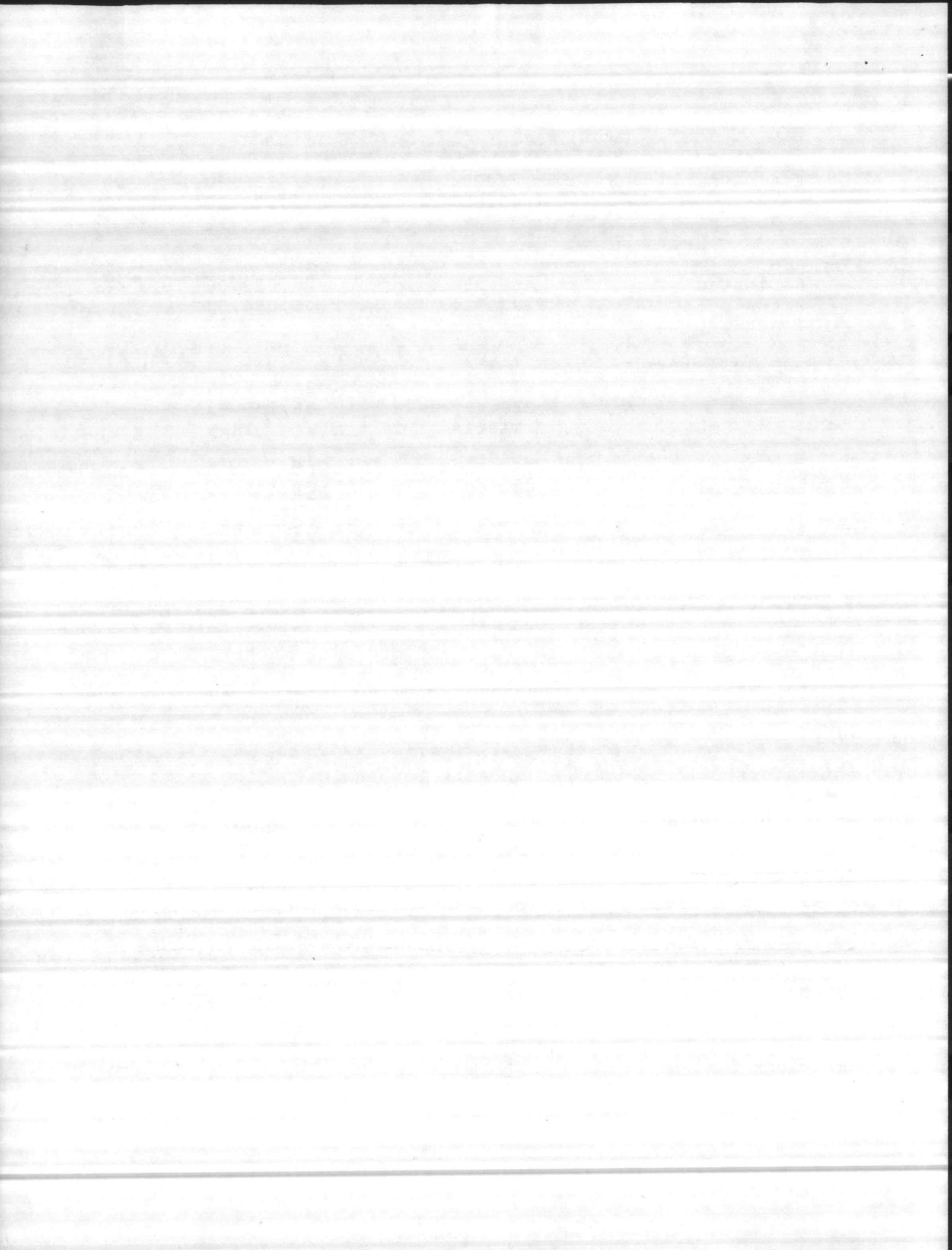
	<u>Material Cost</u>	<u>Total Cost</u>
JOS 3334		
Estimated	\$360.00	\$1,182.00
Actual	662.09	1,475.42
% Act/Est	184%	125%



	<u>Material Cost</u>	<u>Total Cost</u>
<u>JOS 4239</u>		
Estimated	\$ 73.00	\$ 339.00
Actual	45.85	1,523.08
% Act/Est	63%	449%
 <u>JOS 3547</u>		
Estimated	468.00	4,010.00
Actual	803.12	5,054.32
% Act/Est	172%	126%
 <u>JOS 4034</u>		
Estimated	2,838.00	24,269.00
Actual	5,229.49	36,133.93
% Act/Est	184%	149%
 <u>JOS 4710</u>		
Estimated	1,446.00	3,497.00
Actual	688.06	2,535.97
% Act/Est	48%	73%

Estimates prepared by the Operations Division serve several important purposes. First, they provide the basis for scheduling jobs, planning work centers, and ordering material. Inaccuracies in estimating can cause many problems and backlogs within the Maintenance and Repair Division. Second, a valid estimate should be used as a basis for analyzing the performance of the Maintenance and Repair Division. The disparity between actual costs and estimated costs in better than seven out of every 10 job orders over \$600 indicates major problems in the Operations Division and/or the Maintenance and Repair Division.

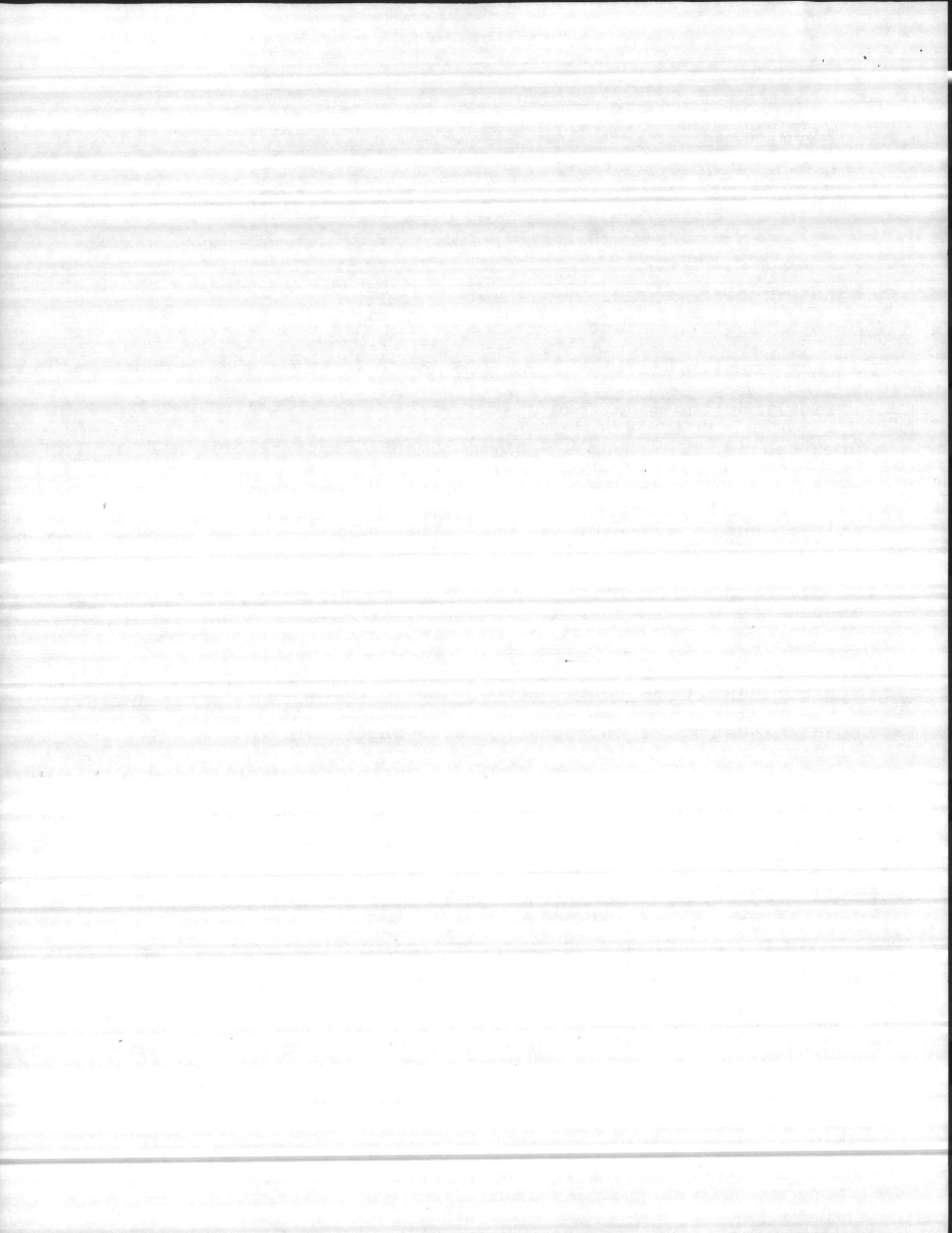
Recommendation 24. MARCORB determine the cause of variances between the estimated and actual costs and take corrective action.



9. Improper use of amendments to specific job orders

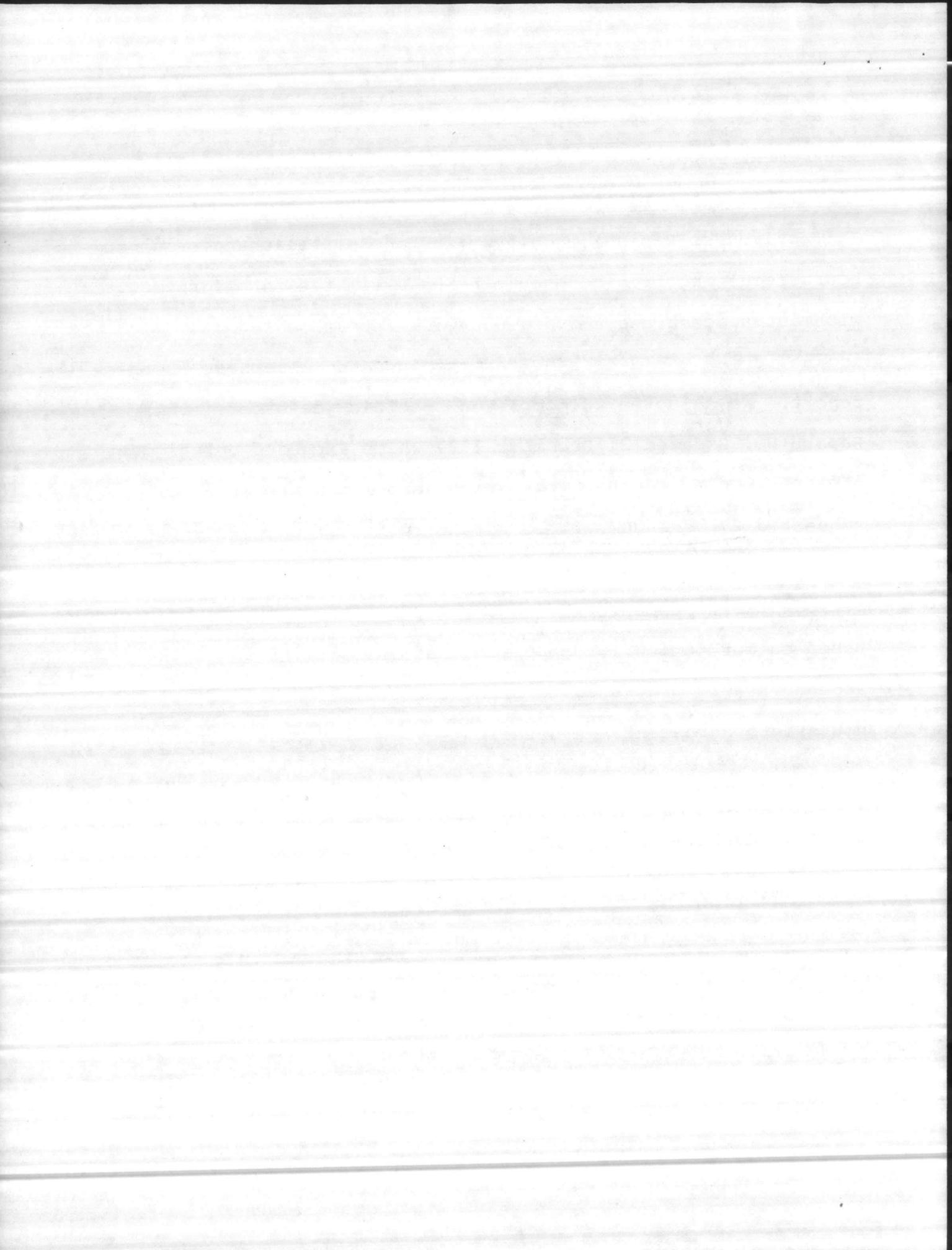
a. MARCORB Maintenance Department is using amendments to specific job orders to adjust estimated cost to agree with actual cost. We found that in most instances the amendments were processed after the work was completed. Amendments should be used in circumstances where specific maintenance or repair is not totally visible during control inspection (e.g., concealed wiring), or the magnitude of the work is not revealed until work begins. Improper use of amendments distorts original estimates on estimated jobs and prevents management from being able to accurately appraise estimates and performance of work. We also found that the Cost Accounting Branch was not processing amendments for specific job orders carried over from prior fiscal year.

b. MARCORB is continuing the use of addendums to adjust original estimates and add estimates which were not included on the original MCBCL Form 11014/18 (Job Order (Controlled Maintenance)) on specific job orders. This condition was previously reported in Audit Report No. C42825 dated 24 September 1973. These addendums result from the shop foreman preparing MCBCL Form 11014/11 (Request for Addendum/Deletion to Specific Work), or from telephone conversation with requesters or shop foreman to the planner/estimator, who in turn prepares an amendment to the job on MCBCL 11014/18. The amendments are forwarded to the Cost Accounting Branch where the new estimates then appear on the Maintenance Management Report No. 3 (Completed Specific Job Orders) as the estimates. The use of amendments



to adjust estimates diminishes the effectiveness of Maintenance Management Report No. 1 (Estimate and Performance Report), Report No. 3 (Completed Specific Job Orders), and Report No. 6 (Effectiveness Rating). In some instances, the changes in man-hours resulting from addendums bring estimates into agreement with actual cost and no variance will appear on Report No. 3 and no review would be required as discussed elsewhere in this report. We selected 30 completed specific job orders from Report No. 3 dated 31 December 1977 which exceeded actual cost of \$600. We found that the various shops had prepared or requested 27 addendums to 15 of the 30 jobs. One job order had three addendums requested from the same shop within a 10-day period (two addendums prior and one after the work was completed). Based on our review, it appeared that in most instances the addendums were processed to bring the estimated and actual man-hours into agreement. A detailed review of the 20 amendments (15 JON's) prepared containing the 27 addendums showed that:

- (1) 50 percent were dated after the date the job was completed;
- (2) nine were prior to completion of the work and one was not dated; and (3) thirteen of the 23 addendums requesting changes of man-hours were for the exact actual man-hours expended. In addition, ten amendments were processed which were not supported by an MCBCL 11014/11 and the estimates for three amendments differ from the estimates shown on MCBCL 11014/11. Some examples of requests for addendums with justifications are as follows:



JON	Shop	Original Estimated Man-hours	Adden- dum	Adjusted Estimated Man-hours	Actual Man-hours	Amend. Date	Date Work Completed
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0003	71	160	32	192	192	10-27-77	10-21-77
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(Justification: More planting than estimated.)

0198	51	224	56	280	280	10-31-77	11-4-77
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(Justification: 1/ Rewire lights and receptacles on boat docks.)

0393	41	12	(12)	-0-	-0-	11-27-77	11-18-77
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(Justification: Carpenter not required.)

1234	61	24	16	40	40	9-28-77	10-28-77
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(Justification: Amendment to labor.)

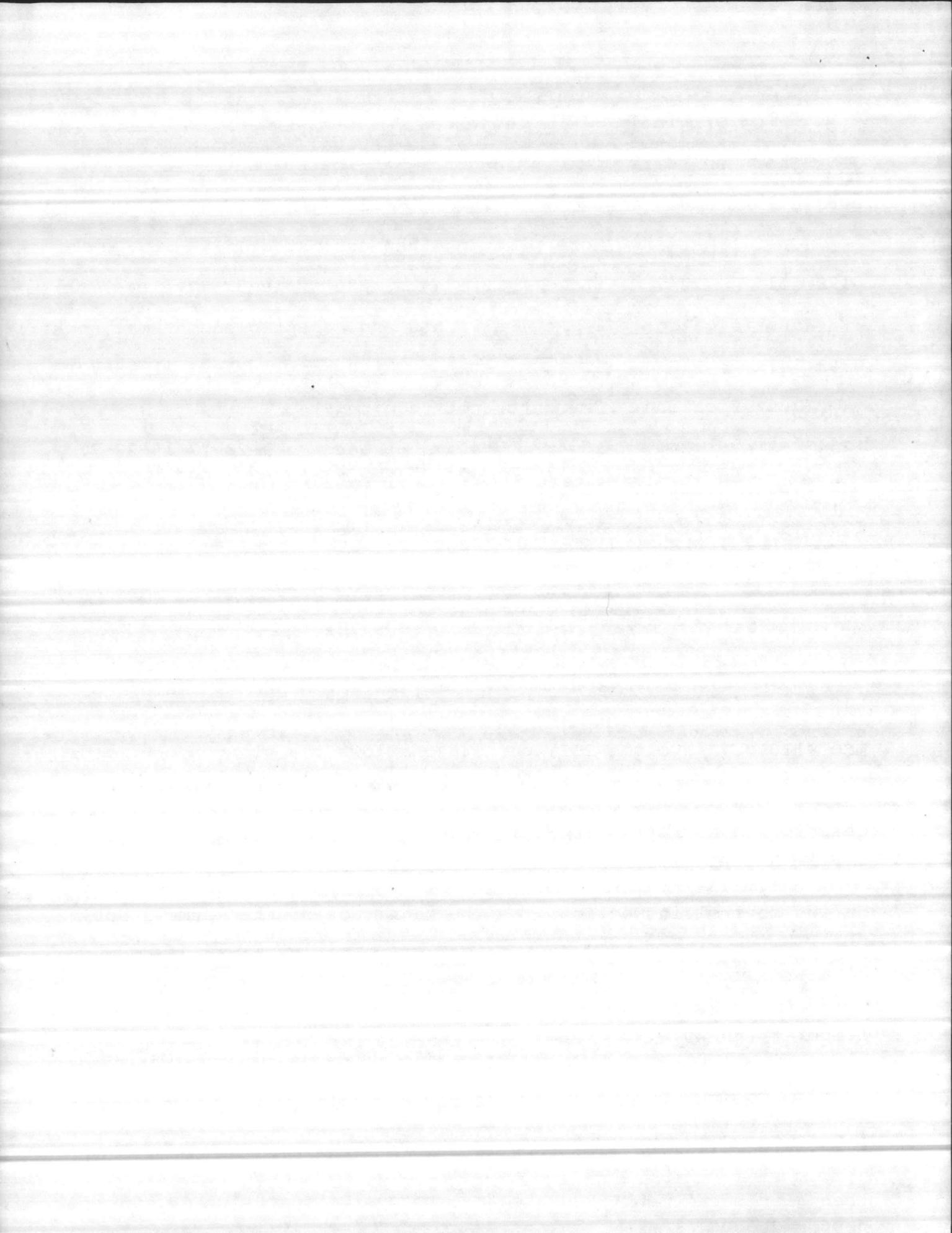
1236	51 ⁽¹⁾	112	32	144	136	10-6-77	10-7-77
	51 ⁽²⁾	112	(16)	128	136	10-13-77	10-7-77

(Justifications: 1/ Justification on amendment was the same as the descriptive narrative of work on the job order.

(1) Lower fluorescent lights

(2) Additional time not needed to complete job order.]

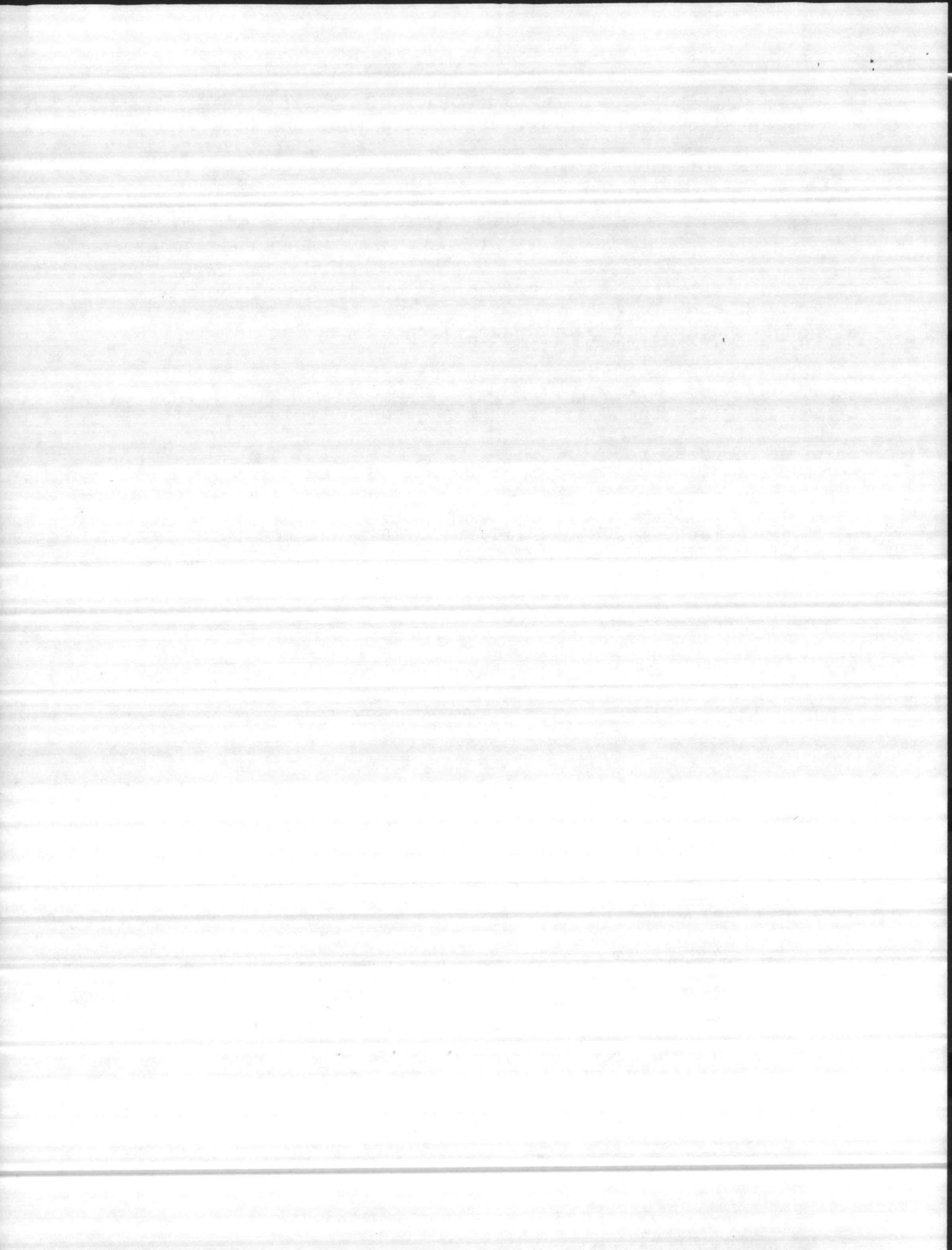
MCO P11000.7A, Volume III, par. 4045 allows the planner/estimator to issue an amendment superseding the basic order, revising the descriptive narrative as well as the estimated man-hours and cost data, when specific maintenance or repair is not totally visible during control inspections, as the magnitude of the work is not revealed until work begins. Amendments will not be issued to adjust poor estimates or time differences because of delay or temporary unsatisfactory work conditions. We believe MARCORB Maintenance Department's use of addendums is not in accordance with the above reference; therefore, the use of addendums (MCBCL 11014/11) to adjust estimated should be discontinued. This would then give management accurate data to evaluated estimates and performance.



c. During our review we also noted ~~that~~ ^{the} the Cost Accounting Branch was not processing all addendums received from Base Maintenance Department, especially those for specific job orders carried over from a prior fiscal year. We found that 20 of the 27 addendums prepared did not appear on the Report No. 3, although they were received and filed at the Cost Accounting Branch. We believe internal controls should be established between BMD and the Cost Accounting Branch to incorporate all data in the cost records.

Recommendation 25. MARCORB issue amendments in accordance with MCO P11000.7A, Volume III, par. 4045 and not to adjust poor estimates or time differences.

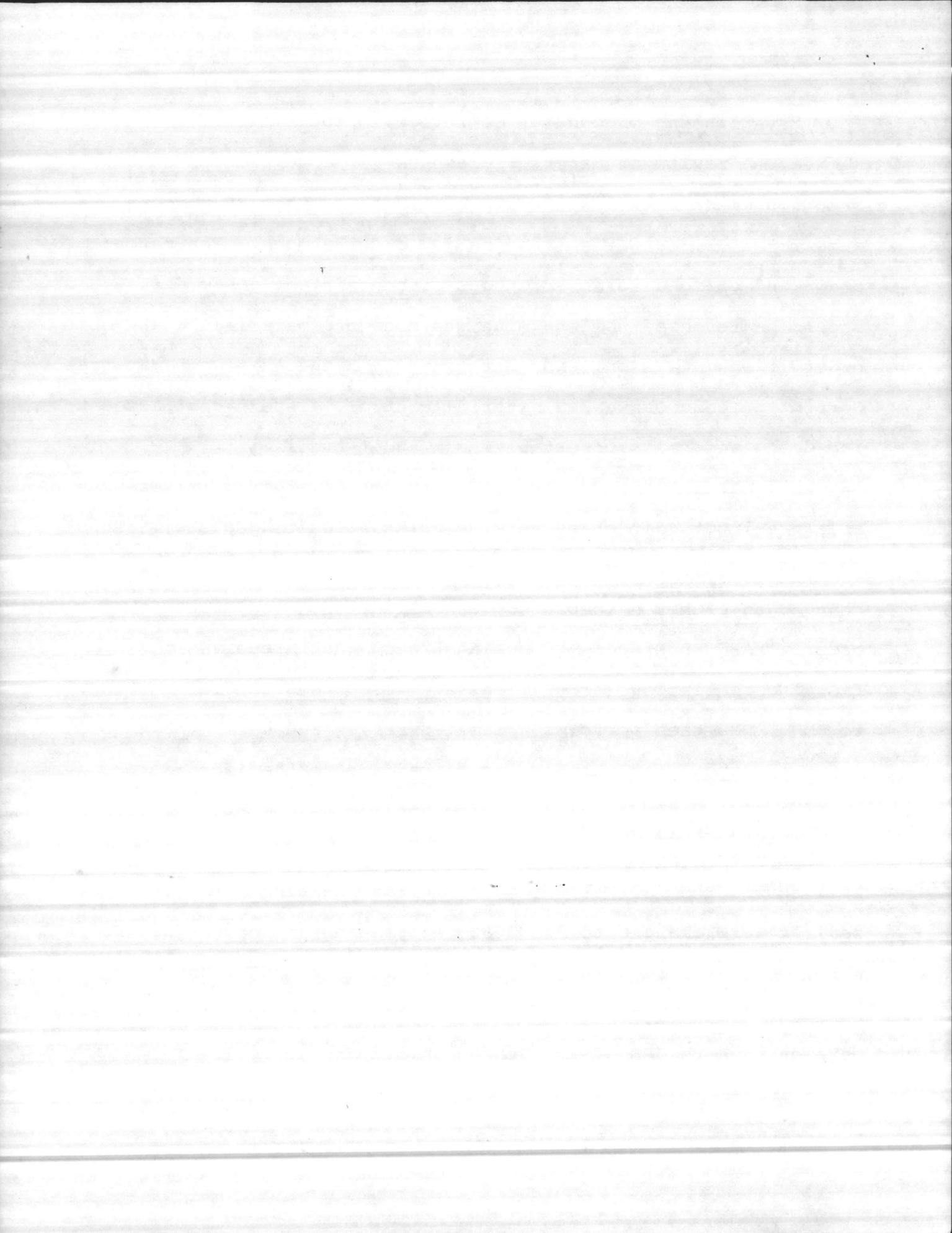
Recommendation 26. MARCORB process all data affecting cost records.



10. Establishing procedures to review improper material charges

a. A review of material drawn on job orders shown on the base fiscal card listing (error list) showed that 39 percent were re-entered under a standing job order number. The material drawn and charged to an erroneous or nonexistent job order should be reviewed to determine who drew the material, what job order it was drawn on, and what actually happened to the material. Current procedures weaken material control, distort cost accounting data, and fails to establish an audit trail.

b. MARCORB has developed a class three program that serves as a pre-input edit phase for the PRIME accounting system. This program is designed to print out on an error list all material charged to either a completed, cancelled, or nonexistent job order. MARCORB Fiscal Accounting Branch (AAA) receives the fiscal card listing (error list) and telephones the information to BMD. BMD then performs a limited review and calls the AAA and tells them what changes are to be made to the job order numbers. No records of the review are maintained at BMD. Our review of the error list for a five-month period ending August 1977 showed that 39 percent of the errors dealing with job order serials were changed to JOS 3098, a standing job order (Service Work, Real Property - WGC 02). A review of an additional six months, back to October 1976, showed many high value line items were changed to JOS 3098. Some examples are as follows:



<u>Date of Run</u>	<u>Original JOS</u>	<u>Changed to JOS number</u>	<u>Line Item Value</u>
7-12-77	5409	3098	\$827.54
3-23-77	2481	3098	366.00
3-31-77	2457	3098	527.76
3-15-77	5662	3098	238.00
2-23-77	5236	3098	527.76
10-10-76	4534	3098	395.82

During fiscal year 1977 there were 130 job orders totalling 233 line items of material valued at \$7,889.40 on the error list that were changed to job order serial 3098. This results in inaccurate data being input into the cost account records and the Facilities Maintenance Management Reports. Failure to properly review materials charged to erroneous or nonexistent job orders tends to weaken controls over government-owned materials.

Recommendation 27. MARCORB forward the base fiscal card listing (error list) directly to BMD for review and appropriate corrections, certification, and return to MARCORB Fiscal Accounting Branch for input into the PRIME accounting system.



// Establishing procedures to control self-help maintenance

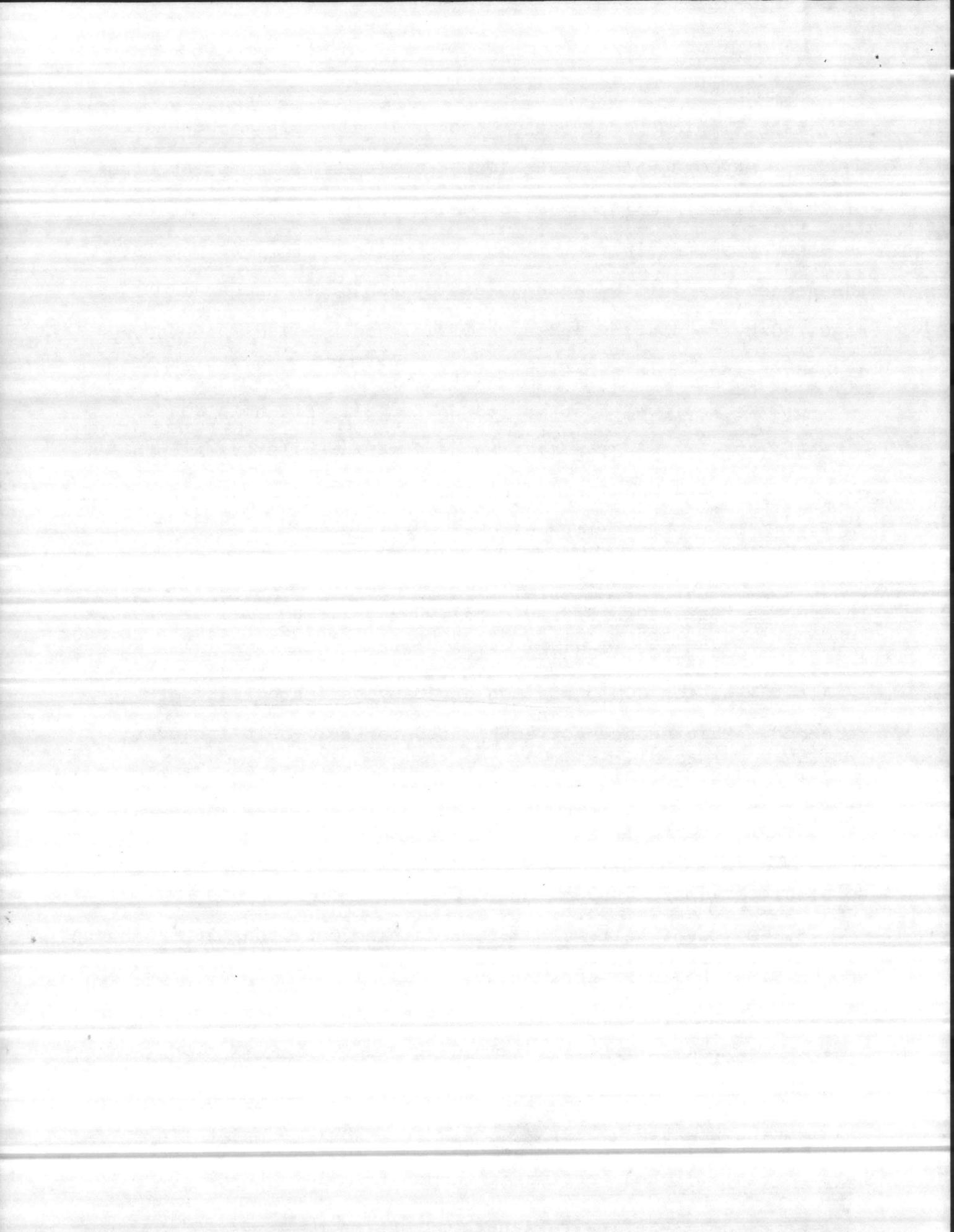
a. MARCORB should establish procedures to improve control of the self-help maintenance program. Maintenance should not be done by self-help that is not authorized. Self-help maintenance cost should be accumulated by job order number (JON) as required by regulation and specifically identified for purposes of budget and administration.

b. We reviewed cost estimates for all self-help JON's in process (47) and pending (27) as of 8 February 1978. A total of 23 in process and 13 pending JON's were for unauthorized self-help work with dollar values as follows:

	<u>Authorized</u>			<u>Unauthorized</u>		
	<u>1/ Labor</u>	<u>Material</u>	<u>Total</u>	<u>1/ Labor</u>	<u>Material</u>	<u>Labor</u>
In process	\$43,740	\$13,264	\$57,004	\$32,978	\$11,947	\$44,925
Pending	28,555	31,336	59,891	12,410	8,493	20,903
	<u>\$72,295</u>	<u>\$44,600</u>	<u>\$116,895</u>	<u>\$45,388</u>	<u>\$20,440</u>	<u>\$65,828</u>

1/ A total of ten JON's did not have any estimated military labor recorded. Maintenance not authorized for self-help includes exterior painting; all electrical work except cleaning/replacing globes, reflectors, standard bulbs, and fluorescent tubes; alterations/modifications; and construction work as provided by BO P11014.1F, par. 405.2i.

c. Costs of self-help work requiring more than 16 man-hours and/or \$100 should be accumulated by specific JON's as provided by MCO P11000.7A, par. 1021.3 and BO P11014.1F, par. 405.2. We reviewed self-help requests for which specific JON's were not issued for three months ending January 1978. We found that cost should have been accumulated by specific JON's for 68 of 110 self-help requests. These estimates ranged from less than \$10 up to \$972. The dollar value for these 68 estimates is as follows:



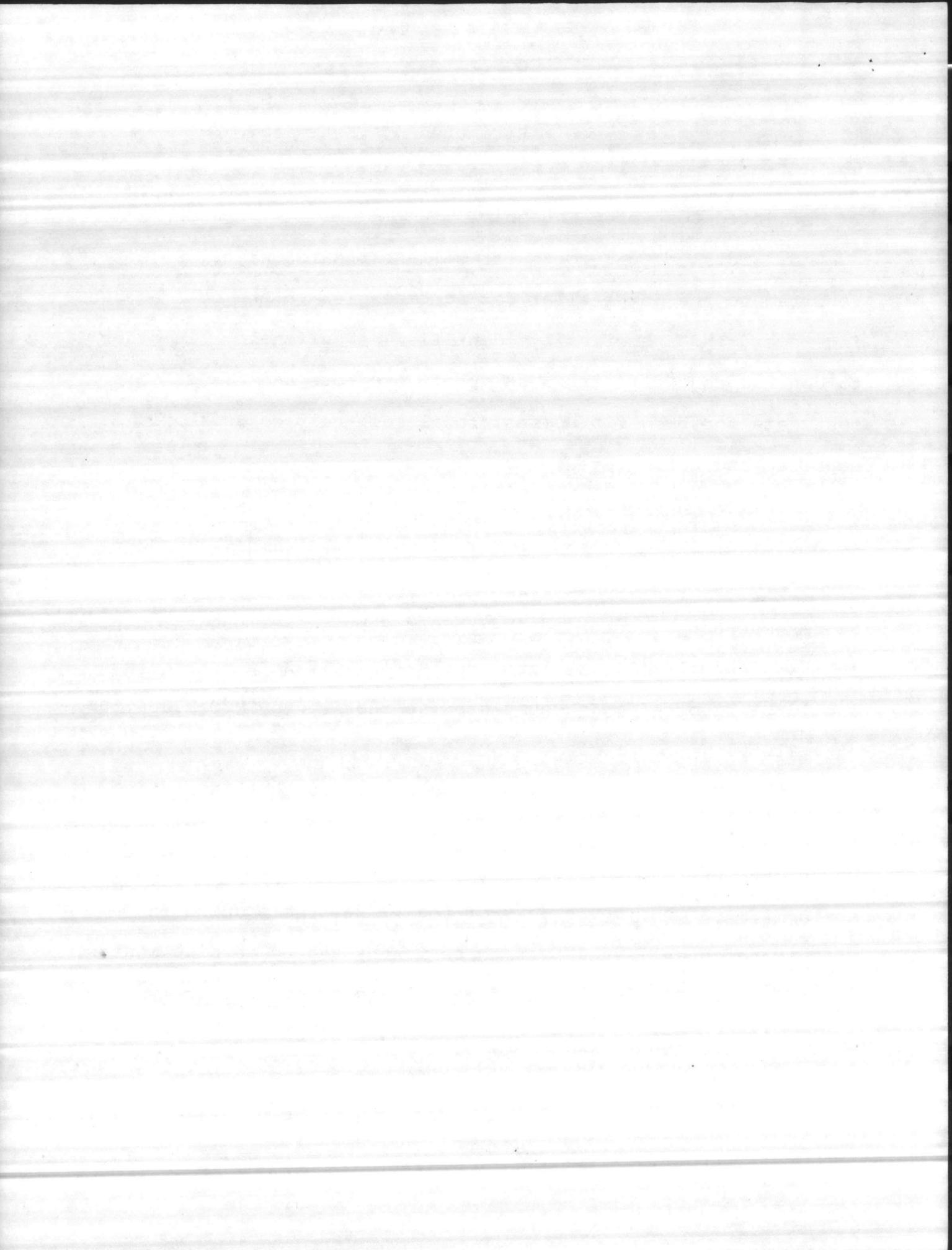
<u>Number of request</u>	<u>Estimated Labor Cost</u>	<u>2/ Estimated Material Cost</u>
68	\$9,065	\$4,182

2/ Estimated cost of paint only.

d. Total actual costs for self-help maintenance are not reported to the Comptroller for accumulation in the cost accounting record and specifically identified as self-help. In order to control cost for larger self-help projects and to use this cost data for budget purposes, total self-help costs should be reported and accumulated.

(1) MARCORB has not established procedures to report accumulated military labor for self-help maintenance. Procedures are established to estimate military self-help labor at \$4 per man-hour on each JON as required by MCO P11000.7A, par. 1021.4. Actual military labor costs for self-help maintenance should be reported and accumulated as required by MCO P7300.10B, par. 8105.1.

(2) BO P11014.1F, par. 405.5 states that inspection of completed self-help work will be performed by Base Maintenance Department representatives upon request by the Project Officer. At the time of our review, 29 of the 47 self-help JON's in process had been issued over three months and up to nine months. We believe BO P11014.1F should be revised to provide for an inspection by Base Maintenance Department of completed self-help work. Upon completion and inspection, self-help specific JON's should be promptly closed and reported on the Completed Specific Job Order Report.



(3) MARCORB does not specifically identify in the cost accounting system self-help cost. Material cost for self-help is reported under Base Maintenance Department Shop Code 93 along with Range Maintenance and Troop Training Project material. Determining the amount of funds expended for self-help for a specific period of time would be extremely difficult under current procedures. We believe self-help cost should be identified separately to facilitate budget preparation and execution.

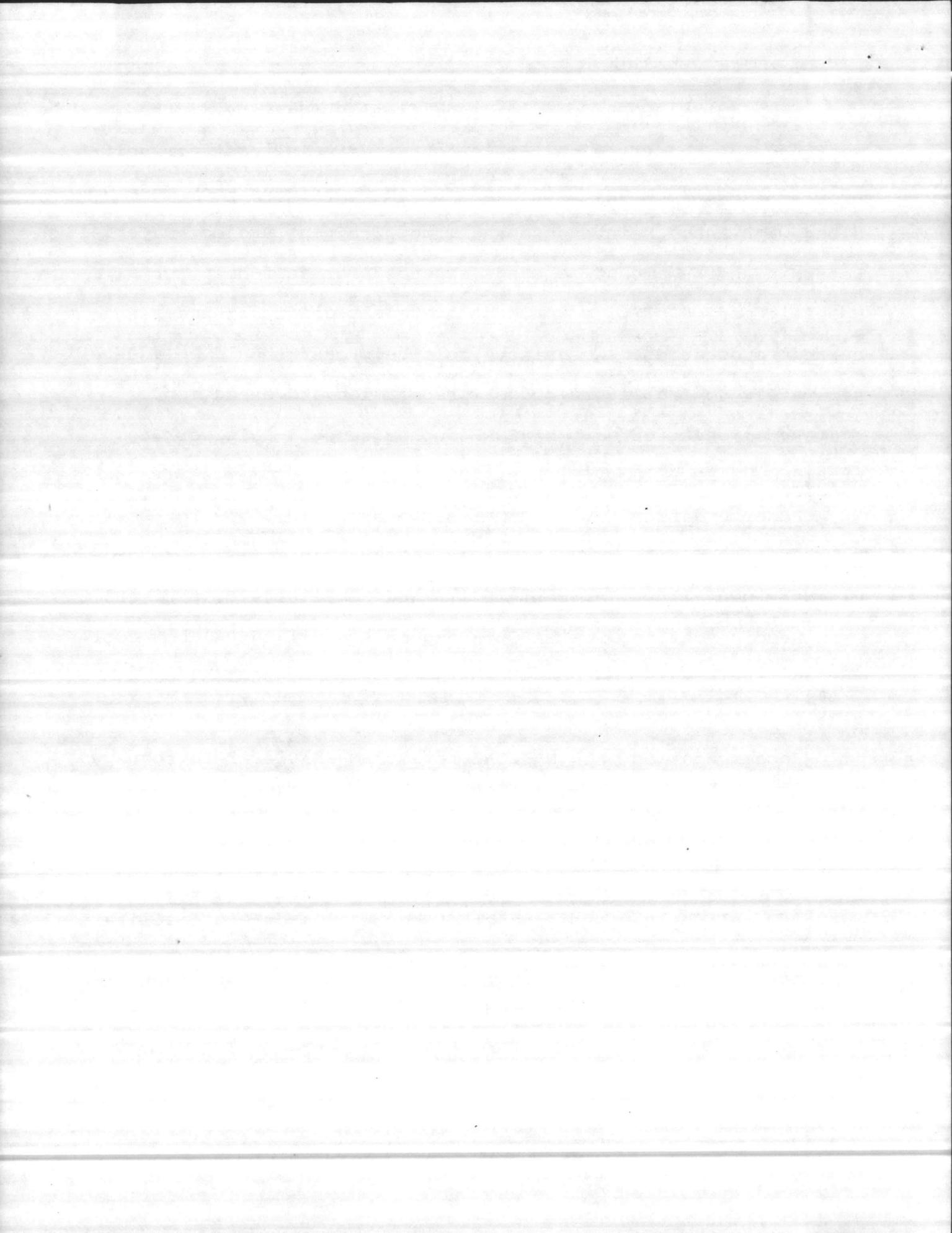
Recommendation 28. MARCORB authorize self-help work as provided by BO P11014.1F, par. 405.2i.

Recommendation 29. MARCORB issue specific JON's for self-help work requiring more than 16 man-hours and/or \$100 as provided by MCO P11000.7A, par. 1021.3 and BO P11014.1F, par. 405.2.

Recommendation 30. MARCORB accumulate military labor cost for self-help maintenance as provided by MCO P7300.10B, par. 8105.1.

Recommendation 31. MARCORB revise BO P11014.1F to require Base Maintenance Department to inspect completed self-help work and promptly close completed specific self-help JON's.

Recommendation 32. MARCORB accumulate and specifically identify self-help costs from other costs in order to facilitate budget preparation and execution.

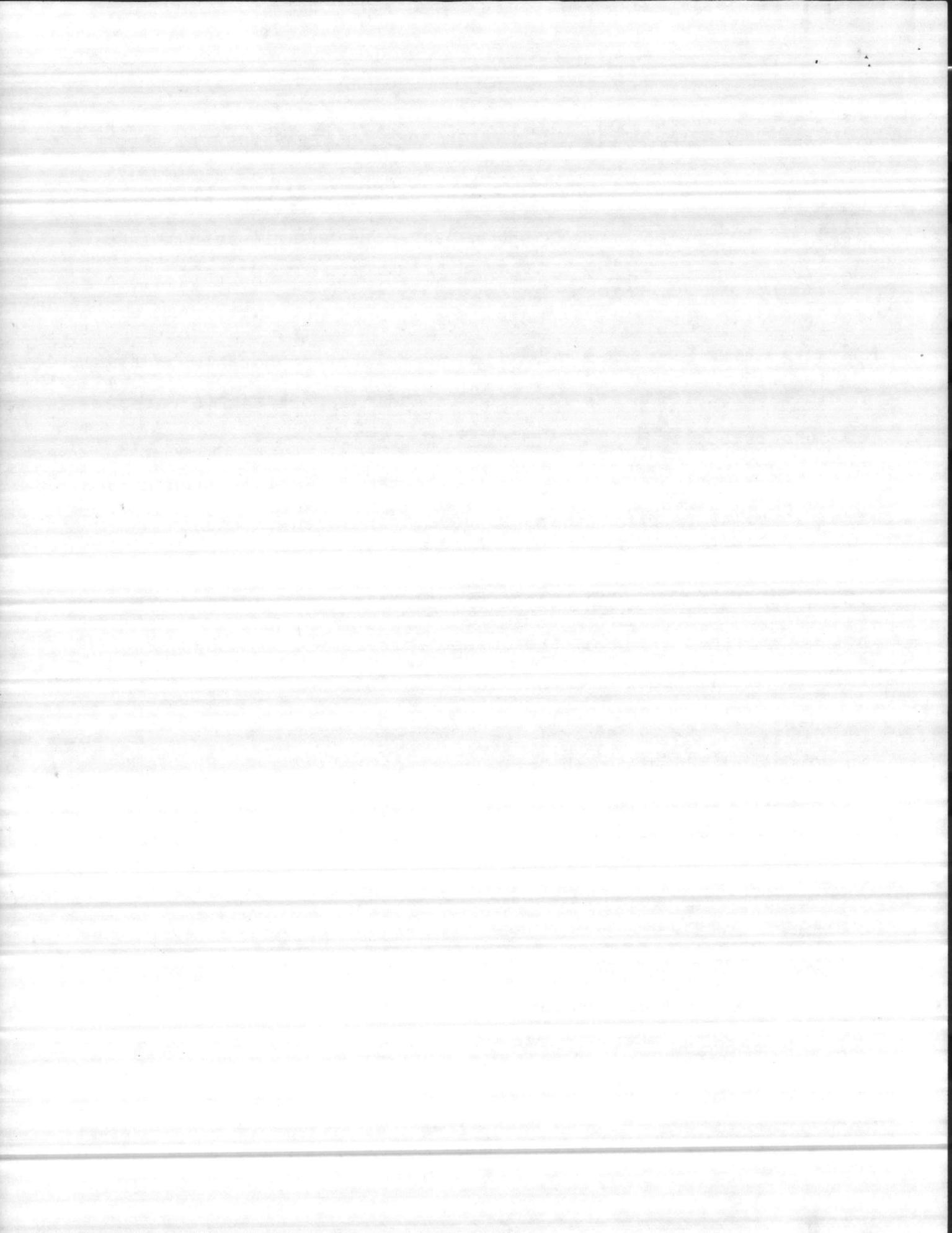


12, Reviewing estimate and Performance Analysis Report (Report No. Number 1)

a. Utilization of Engineering Performance Standards (EPS) is less than 50 percent as shown by Report No. 1. Actual labor costs exceeded estimates of about \$1,802,000 by about \$248,000 for specific job order numbers (JON's) completed during FY 1977. Data reported on Report No. 1 is incomplete and not always timely. A similar condition was reported in Audit Report C42815 dated 17 June 1975.

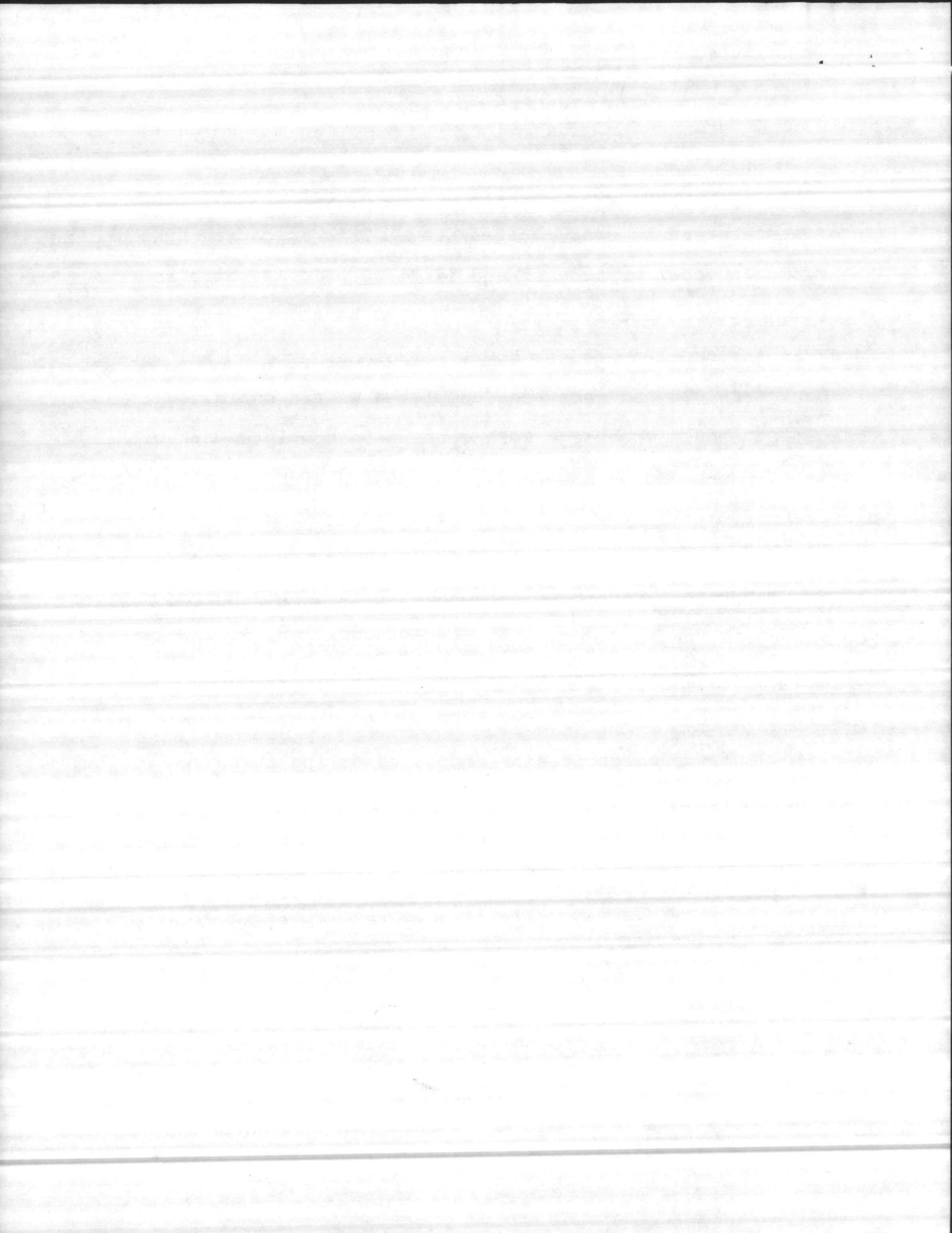
b. Report No. 1 shows that reported EPS utilization ranged from 26 to 49 percent during FY 1977. Included in these percentages are estimated and actual hours for minor work which is in conflict with MOC P11000.7A, par. 4022.3. MARCORB has not established the limits of minor work as required by paragraph 4061.2. Also, procedures should be established to include only standing and specific JON's exceeding the scope of minor work in computing EPS utilization. Reported FY 1977 EPS utilization is less than reported in our Audit Report C42815 for FY 1974 which averaged 56 percent. The desired EPS utilization percentage should range from 80 to 100 percent. MCO P11000.7A, par. 4022 provides that planners/estimators (P/E) should be guided by available EPS to the maximum extent possible. EPS are available for approximately 80 percent of the jobs undertaken by the Maintenance Department.

c. Work centers used a total of 27,656.4 man-hours more than estimated by P/E's to accomplish work on specific JON's



completed in FY 1977 as shown on Report No. 1. This man-hour difference could be overstated since some amendments for estimated man-hours for "open end" specific JON's may not have been input into the maintenance management system. This is caused by a breakdown in local procedures and is discussed elsewhere in this report. Applying the average accelerated hourly labor rate of \$8.97 to the reported excess hours represents a potential savings of about \$248,078 had jobs been completed within estimated times. Management should encourage work centers to complete work within estimated man-hours or determine reasons for significant differences.

d. Our review showed Report No. 1 was not produced for the months of October, November, and December 1977 as required by MCO P11000.7A, Appendix C2, par. 2. The report was produced in May and June 1977 but Base Maintenance monthly estimated and actual labor and material charges were not shown. At least 500 specific JON's were reported as completed during these two months. Also, during these two months year to date labor and material cost increased even though completed JON's were not processed. MARCORB personnel could not explain the causes for these discrepancies. Report No. 1 is printed on microfiche. While this type record requires less space and is cheaper to produce, it does not provide the best "hands on" copy for review and analysis by management. We believe hard copy printout (paper) of Report No. 1 should be provided for analysis and review by management.

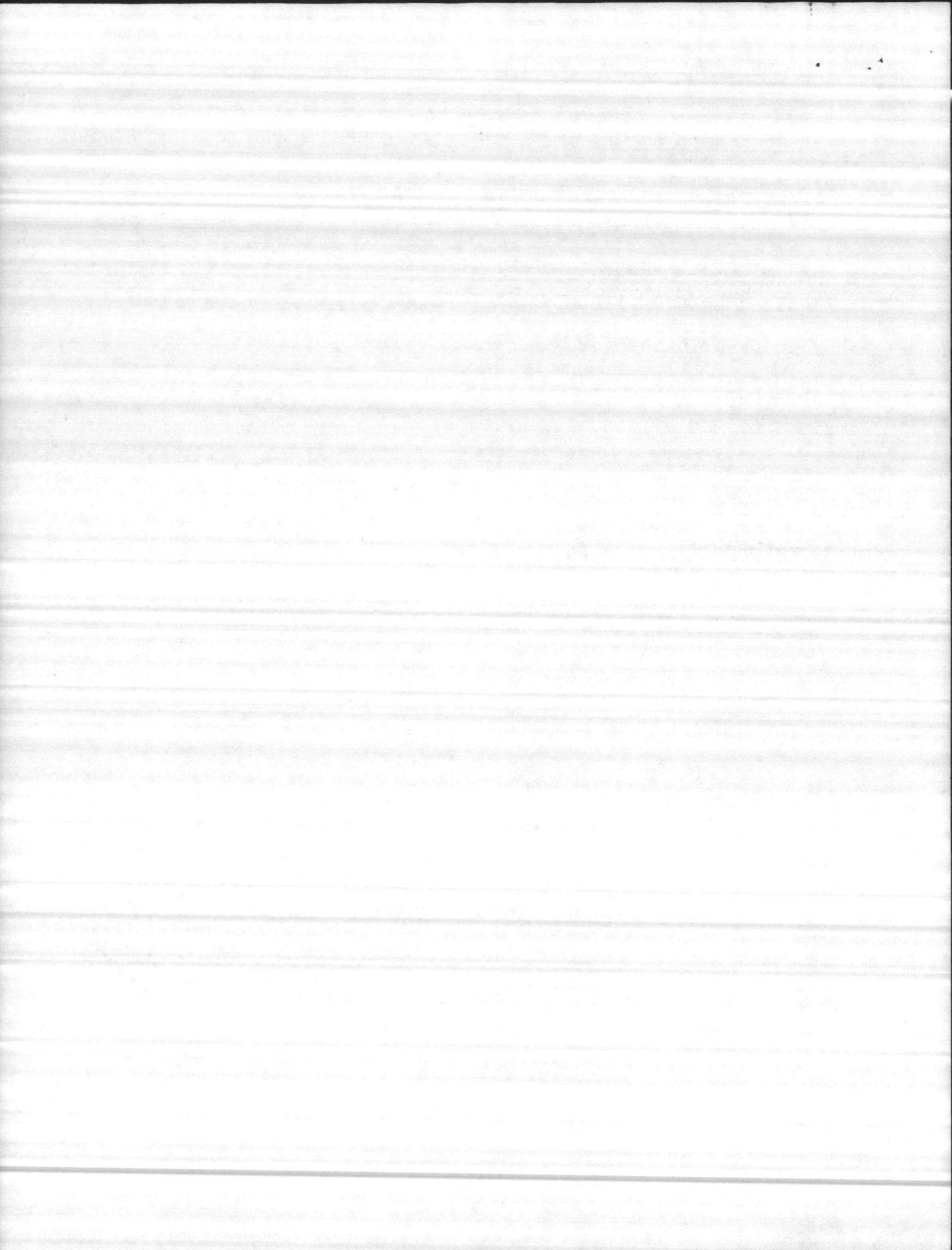


Recommendation 33. MARCORB utilize EPS to the maximum extent possible in providing estimates and require work centers to complete jobs within estimated times.

Recommendation 34. MARCORB produce Report No. 1 monthly, as required by MCO P11000.7A, Appendix C2, par. 2 and provide a hard copy printout for management review.

Recommendation 35. MARCORB determine minor work limits as required by MCO P11000.7A, par. 4061.2.

Recommendation 36. MARCORB exclude estimated and actual man-hours for minor work from the computation, determining EPS utilization percentage as provided by MCO P11000.7A, par. 4022.3.



13. Reviewing bench work for cost effectiveness

a. MARCORB is not performing required reviews of bench type work for cost effectiveness. Adequate information is not currently maintained to properly determine if more economical means are available for the repair or replacement of motors.

b. MCO P11000.7A, Real Property Facilities Manual, Volume III, par. 4080.4, requires an economic analysis be performed annually and filed with the master copy of each standing job order for bench work. As far as can be determined, a review of this type has never been accomplished. Under the current job order system it is impossible to determine the cost of reworking motors. MARCORB should establish a procedure to identify the cost involved in reworking the different types of motors. In addition, sources of supply should be established, along with cost and estimated lead time required for each type motor. After cost data is accumulated for the different types and size motors MARCORB should investigate the feasibility of entering into a service contract for the repair and rehabilitation of electric motors.

Recommendation 37. MARCORB conduct an economic analysis of bench work, as required by MCO P11000.7A, par. 4080.4..

Recommendation 38. MARCORB determine sources of supply, cost and estimated lead time for motors required by MARCORB for comparison in the economic analysis.

Recommendation 39. MARCORB explore the economic feasibility of entering into a service contract for the repair and rehabilitation of electric motors.

