UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542

FAC/JOH/ed
7000
4 Oct 1982

FIRST ENDORSEMENT on CG, MCB ltr COMP/LRM/ln 7546 of 1 Oct 82

From: Assistant Chief of Staff, Facilities
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune, North Carolina 28542

Subj: Naval Audit C42862L - Maintenance and Management of Property

1. Forwarded for appropriate action.

J. T. MARSHALL

MAIN/RES/jik
7500

OCT 0 6 1982

SECOND ENDORSEMENT on CG, MCB ltr COMP/LRM/ln 7546 of 1 Oct 1982

From: Base Maintenance Officer
To: Distribution List

Subj: Naval Audit C42862L - Maintenance and Management of Property

1. Addressees will take appropriate action to ensure that noted corrective actions have been implemented and periodic follow-up undertaken.

2. The Directors, Operations Branch and Director, Maintenance and Repair Branch will place special emphasis on the management and accountability of excess material.

R. F. CALTA

Distribution:
Dir, Opns Br
Dir, M&R Br
Dir, Admin Br

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542

FAC/JOH/ed
7000
4 Oct 1982

FIRST ENDORSEMENT on CG, MCB ltr COMP/LRM/ln 7546 of 1 Oct 82

From: Assistant Chief of Staff, Facilities
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune, North Carolina 28542

Subj: Naval Audit C42862L - Maintenance and Management of Property

1. Forwarded for appropriate action.

J. T. MARSHALL

MAIN/RES/jik
7500

OCT 0 6 1982

SECOND ENDORSEMENT on CG, MCB ltr COMP/LRM/ln 7546 of 1 Oct 1982

From: Base Maintenance Officer
To: Distribution List

Subj: Naval Audit C42862L - Maintenance and Management of Property

1. Addressees will take appropriate action to ensure that noted corrective actions have been implemented and periodic follow-up undertaken.

2. The Directors, Operations Branch and Director, Maintenance and Repair Branch will place special emphasis on the management and accountability of excess material.

R. F. CALTA

Distribution:
Dir, Opns Br
Dir, M&R Br
Dir, Admin Br

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542

COMP/LRM/ln
7546
1 Oct 1982

From: Commanding General
To: Assistant Chief of Staff, Facilities

Subj: Naval Audit C42862L - Maintenance and Management of Property

Encl: (1) Naval Audit Report C42862L - Maintenance and Management of Property

1. The enclosure is forwarded for action. You are responsible for ensuring that recommendations concurred in are implemented. If a recommendation cannot be implemented, you should notify this Headquarters (Attn: Assistant Chief of Staff, Comptroller) immediately.

A. K. MAREADY
By direction

NAVAL AUDIT SERVICE

AUDIT REPORT

AUDIT REPORT C42862L

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

COVERING FUNCTIONAL AREA: MAINTENANCE AND MANAGEMENT OF PROPERTY

10 SEPTEMBER 1982

NAVAL AUDIT SERVICE SOUTHEAST REGION

DEPARTMENT OF THE NAVY
NAVAL AUDIT SERVICE SOUTHEAST REGION
5701 THURSTON AVENUE
VIRGINIA BEACH, VIRGINIA 23455

IN REPLY REFER TO:
B-1:pl
7542/C42862L
10 Sep 1982

From: Director, Naval Audit Service Southeast Region
To: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina

Subj: Audit Report C42862L - Marine Corps Base, Camp Lejeune, North Carolina

Ref: (a) SECNAVINST 7510.7A of 28 Dec 1978; Subj: Department of the Navy Audit Manual for Management
(b) SECNAVINST 5200.34 of 29 May 1981; Subj: Management of followup on Reports of Audit Organizations and Internal Review
(c) SECNAVNOTE 7510 of 8 Jan 1982; Subj: Followup on Naval Audit Service Reports

1. We have completed an audit of the Base Maintenance Department located at Marine Corps Base, Camp Lejeune, North Carolina. In accordance with reference (a), management response statements have been obtained and are included in Section B of the report. Responses received indicate that satisfactory corrective action has been or is being taken on all recommendations.

2. As a result of this audit, separate findings, together with appropriate recommendations, have been referred to the Commandant of the Marine Corps and will be included in the quarterly report.

3. Reference (b) requires monitoring and reporting implementation action on audit reports. Reference (c) requires that you advise the Auditor General on completion of agreed to actions within 15 days after target completion date. A copy of all related correspondence should be provided to the Director, Naval Audit Service Southeast Region. Also, in accordance with references (b) and (c), the Auditor General of the Navy may select audit findings for followup independent of followup performed by superiors in the chain of command.

4. Finding 3 discusses conditions similar to one reported in Audit Report C42837 dated 27 October 1978. You are requested to pay particular attention to this repeat condition.

A. F. BARNETT, JR.

Copy to:
AUDGENAV (20)
CMC (FDR) (12)
CMC (IG) (1)
COMNAVBASE Norfolk (1)
AUDGENAV Special List 29-A

NAVAL AUDIT SERVICE
SOUTHEAST REGION

ABSTRACT

AUDIT NUMBER	TITLE	DATE
C42862L	Marine Corps Base Camp Lejeune, North Carolina	Started: 30 Nov 1981 Completed: 19 Apr 1982 Published: 10 Sep 1982

OBJECTIVE AND SCOPE. The objective of the audit was to review and evaluate procedures, policies, and methods of the Base Maintenance Department (BMD) and to appraise the effectiveness and efficiency of material control, planning, and estimating. We also reviewed the reimbursement from Morale, Welfare, and Recreation (MWR) activities and private organizations for facility support furnished through appropriated funds. Test checks were made on transactions occurring primarily during the period 1 October 1980 through 1 March 1982. The following comments summarize the findings noted during the audit.

UNAUTHORIZED SUPPORT OF NONAPPROPRIATED FUND ACTIVITIES WITH APPROPRIATED FUNDS. Reimbursable expenses for MWR activities are being partially supported with appropriated funds. Detailed regulations concerning appropriated fund support to MWR activities are not being adhered to. During FY 1981, support provided to reimbursable MWR activities without reimbursement to the Operation and Maintenance, Marine Corps (O&MMC) appropriation totaled an estimated $94,237. Proper determination and billing of reimbursable expenses should result in estimated annual potential savings/budget reductions to Appropriation 17-1106.2720 O&MMC in the amount of $94,000. We recommended that Marine Corps Base, Camp Lejeune, North Carolina (MCB) bill the MWR activities for service provided in FYs 1980, 1981, 1982, and future years. We also recommended that MCB maintain essential feeding records for the Commissioned Officers Mess (Open). MCB concurred with both recommendations and implemented corrective actions. (See p. 3)

REVIEW OF COMPLETED SPECIFIC JOB ORDER ESTIMATES AND PERFORMANCE VARIANCES. The level of performance required to accomplish specific job orders generally exceeded acceptable variances from estimated man-hours or material cost. Variances that exceeded authorized limits for completed specific job orders were not always reviewed or were not thoroughly reviewed to determine the reason for the variance. Files were not maintained to support conclusions reached and management was not analyzing variances on job orders reviewed. These problems were caused by inadequate estimates, inadequate performance, or both. The ordering of material and scheduling of work is made difficult because of the unacceptable variances. Unless unauthorized variances are thoroughly reviewed and supporting files maintained, causes, trends, and corrective actions cannot be determined. We recommended MCB review all unacceptable variances for completed specific job orders, maintained workpapers, and files to support conclusions reached, and hold monthly meetings to review variance reports, analyze trends, and initiate corrective action. MCB concurred. (See p. 6)

IMPROVING THE MANAGEMENT OF EXCESS MATERIAL. Management of excess maintenance material, generated when a job is completed or canceled, is inadequate to ensure proper control, handling, and accountability. Established procedures for material management of excess material are not followed, resulting in an undetermined buildup of material on hand and inconsistency in controlling this material. We recommended that MCB improve the control and management of excess material by following procedures outlined in current directives. MCB concurred. (See p. 8)

TRAINING IN THE USE OF ENGINEERING PERFORMANCE STANDARD (EPS) FOR MAINTENANCE PERSONNEL IS NOT ADEQUATE. Planners and estimators, maintenance inspectors, and maintenance and repair supervisors have not been given all the EPS training that is required. The lack of training has been caused primarily by the low priorities assigned to EPS courses and the failure to budget for the courses. Therefore, personnel responsible for inspecting, estimating, planning, and supervising maintenance work have not been adequately trained to use EPS in performing their assigned duties. We recommended MCB include all known EPS training requirements in the annual budget submission and give EPS training the priority needed to meet the requirements of MCO P11000.7B. MCB concurred. (See p. 11)

CORRECTING A LOCAL DATA PROCESSING PROGRAM FOR SUMMARIZING LABOR AND MATERIAL FOR COMPLETED SPECIFIC JOB ORDERS. A local data processing program that summarizes labor and material for completed specific job orders is not always correct. Apparently, the problem is caused by deficiencies in the program which have not been identified and corrected. Due to these errors, reports from the program have limited value to management in determining reasons for unacceptable variances on completed specific job orders. We recommended MCB make necessary correction in the local computer program. MCB concurred. (See p. 13)

NAVAL AUDIT SERVICE
SOUTHEAST REGION

ABSTRACT

AUDIT NUMBER	TITLE	DATE
C42862L	Marine Corps Base Camp Lejeune, North Carolina	Started: 30 Nov 1981 Completed: 19 Apr 1982 Published: 10 Sep 1982

OBJECTIVE AND SCOPE. The objective of the audit was to review and evaluate procedures, policies, and methods of the Base Maintenance Department (BMD) and to appraise the effectiveness and efficiency of material control, planning, and estimating. We also reviewed the reimbursement from Morale, Welfare, and Recreation (MWR) activities and private organizations for facility support furnished through appropriated funds. Test checks were made on transactions occurring primarily during the period 1 October 1980 through 1 March 1982. The following comments summarize the findings noted during the audit.

UNAUTHORIZED SUPPORT OF NONAPPROPRIATED FUND ACTIVITIES WITH APPROPRIATED FUNDS. Reimbursable expenses for MWR activities are being partially supported with appropriated funds. Detailed regulations concerning appropriated fund support to MWR activities are not being adhered to. During FY 1981, support provided to reimbursable MWR activities without reimbursement to the Operation and Maintenance, Marine Corps (O&MMC) appropriation totaled an estimated $94,237. Proper determination and billing of reimbursable expenses should result in estimated annual potential savings/budget reductions to Appropriation 17-1106.2720 O&MMC in the amount of $94,000. We recommended that Marine Corps Base, Camp Lejeune, North Carolina (MCB) bill the MWR activities for service provided in FYs 1980, 1981, 1982, and future years. We also recommended that MCB maintain essential feeding records for the Commissioned Officers Mess (Open). MCB concurred with both recommendations and implemented corrective actions. (See p. 3)

REVIEW OF COMPLETED SPECIFIC JOB ORDER ESTIMATES AND PERFORMANCE VARIANCES. The level of performance required to accomplish specific job orders generally exceeded acceptable variances from estimated man-hours or material cost. Variances that exceeded authorized limits for completed specific job orders were not always reviewed or were not thoroughly reviewed to determine the reason for the variance. Files were not maintained to support conclusions reached and management was not analyzing variances on job orders reviewed. These problems were caused by inadequate estimates, inadequate performance, or both. The ordering of material and scheduling of work is made difficult because of the unacceptable variances. Unless unauthorized variances are thoroughly reviewed and supporting files maintained, causes, trends, and corrective actions cannot be determined. We recommended MCB review all unacceptable variances for completed specific job orders, maintained workpapers, and files to support conclusions reached, and hold monthly meetings to review variance reports, analyze trends, and initiate corrective action. MCB concurred. (See p. 6)

IMPROVING THE MANAGEMENT OF EXCESS MATERIAL. Management of excess maintenance material, generated when a job is completed or canceled, is inadequate to ensure proper control, handling, and accountability. Established procedures for material management of excess material are not followed, resulting in an undetermined buildup of material on hand and inconsistency in controlling this material. We recommended that MCB improve the control and management of excess material by following procedures outlined in current directives. MCB concurred. (See p. 8)

TRAINING IN THE USE OF ENGINEERING PERFORMANCE STANDARD (EPS) FOR MAINTENANCE PERSONNEL IS NOT ADEQUATE. Planners and estimators, maintenance inspectors, and maintenance and repair supervisors have not been given all the EPS training that is required. The lack of training has been caused primarily by the low priorities assigned to EPS courses and the failure to budget for the courses. Therefore, personnel responsible for inspecting, estimating, planning, and supervising maintenance work have not been adequately trained to use EPS in performing their assigned duties. We recommended MCB include all known EPS training requirements in the annual budget submission and give EPS training the priority needed to meet the requirements of MCO P11000.7B. MCB concurred. (See p. 11)

CORRECTING A LOCAL DATA PROCESSING PROGRAM FOR SUMMARIZING LABOR AND MATERIAL FOR COMPLETED SPECIFIC JOB ORDERS. A local data processing program that summarizes labor and material for completed specific job orders is not always correct. Apparently, the problem is caused by deficiencies in the program which have not been identified and corrected. Due to these errors, reports from the program have limited value to management in determining reasons for unacceptable variances on completed specific job orders. We recommended MCB make necessary correction in the local computer program. MCB concurred. (See p. 13)

TABLE OF CONTENTS

SECTION A - INTRODUCTION

MISSION AND BACKGROUND

The Marine Corps Base, Camp Lejeune, North Carolina (MCB) mission is to provide housing, training, logistical support, and certain administrative support for Fleet Marine Force, U.S. Atlantic Fleet units and other units as assigned; to conduct specialized schools and other training as directed. The mission of the Base Maintenance Department (BMD) is to provide maintenance and repair of buildings, grounds, paved surfaces, utilities systems, and other real property facilities; operation of utilities systems including utility purchases; engineering support services such as BMD administrative, pest control, refuse and garbage collection and disposal (less family housing); minor construction; work support for Government-owned personal property encompassing installation, fabrication, technical inspection, and repair of personal property; and miscellaneous services for other than real property, which is not the responsibility of the user and management of natural resources and environmental affairs. BMD was staffed with 778 permanent and 67 temporary civilian employees and 34 military personnel. About $36,711,000 in Operation and Maintenance, Marine Corps (O&MMC) funds was budgeted for FY 1982. Also, reimbursable work of about $7,356,000 was expected to be accomplished during the year.

AUDIT SCOPE

The scope of our audit was directed primarily to reviewing BMD's economy and efficiency of operations and compliance with current directives and regulations. This included the evaluation of internal controls in material management, effectiveness of management reports, and estimating. Also, included was evaluation of facility support with appropriated funds for Morale, Welfare, and Recreation (MWR) activities and private organizations. Reviews were made of transactions occurring primarily during the period 1 October 1980 through 1 March 1982. Our audit was made in accordance with generally accepted Government auditing standards.

SUMMARY EVALUATION

Based on our audit, we concluded that additional emphasis should be placed on improving material estimates and control and management of materials generated from overestimating requirements. BMD is accomplishing its mission satisfactorily; however, we believe that the operation could be improved if the opportunities for management improvements discussed in Section B of the report are implemented. Also, findings involving inadequate estimates of materials and support of private organizations with appropriated funds have been referred to the Commandant of the Marine Corps (CMC) for resolution and will be included in the CMC quarterly report.

AUDIT MILESTONES

Pertinent actions since beginning the onsite examination on 30 November 1981 are:

	Date
Complete report to MCB	19 Apr 1982
Management responses received from MCB	24 May 1982
Resolution conferences	27 May 1982
Revised management responses received from MCB	4 Jun 1982

The cooperation and courtesies extended to our auditors by MCB personnel are appreciated.

SECTION B - AUDIT FINDINGS AND RECOMMENDATIONS, MANAGEMENT RESPONSES AND NAVAUDSVCSE COMMENTS

MAINTENANCE AND MANAGEMENT OF PROPERTY

1. Unauthorized support of nonappropriated fund activities with appropriated funds

a. Reimbursable expenses for MWR activities are being partially supported with appropriated funds. Detailed regulations concerning appropriated fund support to MWR activities are not being adhered to. During FY 1981 support provided to reimbursable MWR activities without reimbursement to the O&MMC appropriation totaled an estimated $95,701. Proper determination and billing of reimbursable expenses should result in estimated potential savings/budget reductions to appropriation 17-1106.2720 (O&MMC) in the amount of $96,000 annually.

b. Areas in which appropriated funds are authorized for support of MWR activities are outlined in NAVCOMPT Manual, par. 075260. For funding support purposes, MWR activities are divided into eight categories depending on how they are organized, operated, and controlled. Elements of expense for which appropriated fund support may be provided to MWR activities are listed according to category. A review of elements of expense under each category showed that appropriated funds are not being reimbursed for some categories of expenses. The results are as follows:

(1) Utilities and telephone support provided to Temporary Lodging Facilities (TLF) (Hostess House) (Category VII) has been paid with appropriated funds. NAVCOMPT Manual, par. 075260, requires that the costs of utilities and telephone services for TLF (Hostess House) be paid with nonappropriated funds. In January 1980, MCB requested CMC to grant relief from this position. On 19 January 1982, during the course of the audit, we were informally advised by CMC that relief would not be granted. On 26 February 1982, CMC required all activities with TLFs to reimburse appropriated funds for FYs 1980, 1981, and 1982, and subsequent fiscal years. Reimbursable charges for FYs 1980 and 1981 were estimated at $48,798 and $56,069, respectively.

(2) Incorrect computation of utility charges for the Commissioned Officers Mess (Open) (COM(O)) has resulted in the underbilling of nonappropriated funds by an estimated $38,168 annually. NAVCOMPT Manual, par. 075260, Category V, provides that appropriated funds are authorized for a reasonable proration of costs of COM(O) designated as essential feeding functions. A review of utilities billing for the COM(O) showed the following discrepancies:

(a) Essential feeding percentage for determining cost of utilities to be charged to appropriated funds is incorrect. Currently the cost of utilities is charged at 23 percent nonappropriated and 77 appropriated. The COM(O) Utility Review Committee is tasked with the responsibility of reviewing the portion of cost of utilities used by the COM(O) that should be charged to appropriated funds; however, this review

was not made. The Club Manager completed a survey of essential and nonessential meals served for the period May through July 1981 which showed 60.8 percent essential feedings and 39.2 percent nonessential feedings. However, this did not include meals served at parties. MCO P1746.15, par. 7002.1h, outlines procedures for determining essential feeding and records to be maintained and states that the total meals served to all patrons will include catered and private party meals when determining the proration of appropriated support for essential meals. Our inclusion of party meals served in the survey totals resulted in a ratio of 57.2 percent appropriated and 42.8 percent nonappropriated. As a result of not using the proper ratio, electricity for the COM(O) was underbilled $8,331 for FY 1981.

(b) The COM(O) is not being billed for steam used to operate the steam absorption air-conditioning system. The electrical air-conditioning system at the COM(O), Building PP2615, was replaced with a steam absorption air-conditioning system in April 1980. The yearly amount of steam required to operate the steam absorption system was 5,588,519 pounds, of which the portion of cost that should be charged to nonappropriated funds is estimated at $26,167. Billing for the steam absorption air-conditioner is based on a flat rate of 22,064 kilowatt hours (KWH) of electricity used by the old electric air-conditioning system. During FY 1981, the COM(O) was charged for the 22,064 KWH totaling $1,017, leaving an underbilling of $25,150.

(c) The heat loss summary method for billing steam used at the COM(O), Building PP2615, for heat and hot water is inaccurate. Prior to use of the heat loss summary method, the other methods used for determining steam usage were metering and consumption factor. In December 1979, MCB determined that the meter at the COM(O) was inaccurate. To determine a reasonable estimate of steam used at the COM(O), BMD developed a consumption factor for steam used for heat and hot water. Based on FY 1979 operation, the average metered steam usage was 670,000 pounds per month. Under the heat loss summary method currently being used, the estimated monthly steam usage is 125,000 pounds. Using the consumption factor, we computed a monthly steam usage of 376,000 pounds which would result in underbilling of $4,687 annually.

c. MCB should review all support provided to MWR activities and provide support only to the extent authorized in NAVCOMPT Manual, par. 075260.

Recommendation 1. MCB bill MWR activities for services provided in FYs 1980, 1981, as applicable, and 1982 and future years in accordance with NAVCOMPT Manual, par. 075260, and credit prior year recoupment to the fiscal year appropriation which was in effect and charged for the services furnished.

Recommendation 2. MCB maintain essential feeding records and make computations for appropriated funding support as required by MCO P1746.15, par. 7002.

MCB response (Recommendation 1). Concur that MWR activities should be charged for services in accordance with NAVCOMPT Manual, par. 075260, and credit prior year recoupment credited to the fiscal year in effect and charged for the service. Action taken includes:

a. Billing the TLF (Hostess House) for utilities. MCB has billed the Hostess House for utilities in accordance with CMC letter FDR-50/lab dated 26 February 1982 and is reviewing telephone services to determine which phones are needed for command supervision. The review will be completed by 11 June 1982.

b. Billing the COM(O) for correct amount of utilities. MCB recomputed utilities for FY 1980 to date using a consumption factor in lieu of the heat loss summary method for steam usage; revised the percentage for nonessential feeding from the effective date of MCO P1746.15; and corrected the steam charges to operate the steam absorption air-conditioning system. The additional amount billed is $73,166 or $12,898 for 1980; $39,632 for 1981; and $20,636 through 30 April 1982. However, while not addressed in the audit findings, the COM(O) is authorized appropriated fund support for essential meal services in accordance with MCO P1746.15, par. 7002. The COM(O) has billed MCB $73,433 for essential meal services from the effective date of the order through 28 February 1982. The COM(O) will bill MCB approximately $7,600 (total) for March and April as soon as the required information can be extracted from the records. There is not a $38,168 cost savings as indicated in the audit findings; conversely, approximately $7,867 of appropriated fund support is required from FY 1980 to date.

MCB response (Recommendation 2). Concur. MCB is now complying with the recommendation.

NAVAUDSVCSE comment (Recommendation 1). MCB's billing of the Hostess House and COM(O) for $134,275 and $73,166, respectively, for utility services complies with the intent of the recommendation. MCB's comments on authorized appropriated fund support for salary costs (MCO P1746.15, par. 7200) of nonappropriated fund civilian employees at the COM(O) attributable to essential meal service has no affect on savings identified in the audit. The scope of our review was limited to facility support and telephone service provided by the BMD and did not include a review of the total operations of MWR activities. The reimbursement cited in MCB's response has not been audited for correct entitlements from appropriated funds. The appropriated fund support for labor due to essential feeding is a liability that MCB has been aware of since the authorizing directive was effective in September 1980. The COM(O) was collecting data in order to bill MCB for labor prior to our audit.

NAVAUDSVCSE comment (Recommendation 2). Action taken by MCB should correct the cited condition.

2. Review of completed specific job order estimates and performance variances

a. The level of performance required to accomplish specific job orders generally exceeded acceptable variances from estimated man-hours or material cost. Variances that exceeded authorized limits for completed specific job orders were not always reviewed or were not thoroughly reviewed to determine the reason for the variance. Files were not maintained to support conclusions reached and management was not analyzing variances on job orders reviewed. These problems were caused by inadequate estimates or inadequate performance, or both, and inadequate job order variance reviews. The ordering of material and scheduling of work is made more difficult because of the unacceptable variances. Unless unacceptable variances are thoroughly reviewed and supporting files maintained, causes, trends, and corrective actions cannot be determined. Similar conditions were reported in Audit Report C42837 dated 27 October 1978; however, improvements have been made since that audit.

b. Variance reports are required when actual material cost exceeds $2,000 or when estimated or actual man-hours exceed 80 hours for any work center and the variance is greater than 109 or less than 91 percent as stated in MCO P11000.7B, par. 5030.2C. The material cost or man-hours for 210 completed specific job orders during 5 months ended September 1981 met the review criteria. A variance report was required for 124 (59 percent) because of excessive variances in man-hours or material cost. We reviewed these 124 job orders and found the following:

(1) A total of 58 job orders had not been reviewed. Thirty-five of these job orders for July were not reviewed because of data processing problems that summarize labor and material for completed specific job orders. However, fiscal and cost accounting records could have been used to make the review. The remaining 23 were overlooked during the reviews which were made. We determined that none of the unacceptable variances for Work Center 80 (Utilities) were being reviewed. Examples of job orders not reviewed follows:

Job order number (JON)	Work center	Man-hours	Material cost
1015	52		
Estimated		32	$1,392.00
Actual		35	2,188.39
Percentage		109	157
4071	61		
Estimated		40	100.00
Actual		88	102.90
Percentage		220	102
7429	71		
Estimated		289	-0-
Actual		372	-0-
Percentage		128	-0-
3542	81		
Estimated		16	6,750.00
Actual		16	5,209.60
Percentage		100	77

(2) MCB reviewed 66 of the 124 job orders with unacceptable variances. Our analyses of the eight variance reports made for September 1981 showed the reviews were not made in enough detail to be conclusive. We also found that workpapers or files were not maintained to support the conclusions reached. Monthly meetings between the Operations Officer, Assistant or Facilities Maintenance Officer, and Director of the Maintenance and Repair Division were not held to review variance reports, analyze trends, and initiate corrective action as required by MCO P11000.7B, par. 5030.2C. Workpapers or files supporting variance reports should be available for use by management during the monthly meetings. Two examples of reviews made are:

(a) Job Order 1018, Work Center 62, material estimated $2,352; actual material cost $3,322.67; percentage of estimate 141.3 percent. The variance report stated the reason for the difference was computer error and price increases. We did not find a computer error. There were some price increases totaling $392.28. Some of the discrepancies we found were: (1) a total of $1,159.70 was charged to the job order but was not included in the estimate; (2) a total of $461.52 was estimated and used but not charged to the job order; (3) a total of $230.22 was charged but not used on the job; and (4) a total of $28.82 was estimated but not charged.

(b) Job Order 1256, Work Center 41, material estimate $3,167; actual material cost $4,736.49; percentage of estimate 149 percent; estimated labor 248 hours; actual labor 208 hours; percentage of estimate 83 percent. The variance report stated the reason for the difference in labor was that the labor was overstated and an amendment was not turned in. This appears to be an accurate statement. The reason given for the material difference was that one item of material was overcharged by the

computer. We found these discrepancies: (1) the job order was overcharged $1,759.73 for one line item; (2) a credit given for one line item was understated by $185.94; (3) the job order was charged once for one line item but credit was given two times for a total of $51.40; (4) the quantity required for one line item was overstated 18 percent for a total of $11.80; and (5) a total of $7.75 was used but not estimated.

Recommendation 3. MCB review all unacceptable variances for completed specific job orders as required by MCO P11000.7B, par. 5030.2C.

Recommendation 4. MCB maintain workpapers and files to support conclusions reached for man-hour and material cost variance reports and hold monthly meetings to review the variance reports, anlayze trends, and initiate corrective action as required by MCO P11000.7B, par. 5030.2C.

MCB response (Recommendations 3 and 4). Concur. As indicated in the audit findings, improvements have been made since the last audit in 1978. MCB recognizes the benefits to be derived from review of unacceptable variances and maintenance of workpapers and files sufficient to support conclusions reached. Increased emphasis and attention has been directed to these areas and will continue.

NAVAUDSVCSE comment (Recommendations 3 and 4). Actions taken and planned by MCB should improve variance reviews.

3. Improving the management of excess material

a. Management of excess maintenance material, generated when a job is completed or canceled, is inadequate to ensure proper control, handling, and accountability. Established procedures for material management of excess material are not followed, resulting in an undetermined buildup of material on hand and inconsistency in controlling this material. The quantity of material on hand cannot be managed efficiently and/or effectively with a manual recordkeeping system.

b. Our review showed that unused project materials, either left over after a job was completed or canceled, were not properly reported, or required disposition made, recorded, and reviewed. Maintenance Order (MO) P4400.2 (Standing Operating Procedures for Maintenance Material Management) outlines procedures for managing materials. Discrepancies noted during our review were:

(1) Appropriate annotations on job orders were not made denoting unused project materials and disposition of the property. (MO P4400.2, par. 603)

(2) Improved coordination is needed with the Officer in Charge, Shop Stores to identify material that may be turned in for credit after the job is completed. (MO P4400.2, par. 602.2a)

(3) Data was not available to trace or identify materials for which the Direct Stock Support Control (DSSC) activity will not grant credit, but retained to be used to replenish pre-expended bin, special operating stock, or a shop maintained insurance item, subject to limitations. (MO P4400.2, par. 602.b)

(4) Materials retained to be used on future projects were not properly identified for that purpose, nor were dates available to determine if material is retained for more than 12 months. (MO P4400.2, par. 602.c)

(5) Maximum efforts were not made to dispose of material not reutilized, either by turn-in to DSSC with no credit or through Defense Property Disposal Office (DPDO).

(6) Procedures provided for obtaining approval to retain used, serviceable material, and excess material from military construction projects were not followed resulting in a buildup of salvage material. (MO P4400.2, par. 504)

MO P4400.2, par. 601.2, authorizes material to be retained only when it can be demonstrated its retention meets the criteria of an insurance item or can be used in the near future on a specific or standing job order. However, material will not be retained for more than 12 months. The retention of salvage material must meet the criteria of no longer manufactured, obtain approval from Base Maintenance Officer, and managed as excess material in accordance with MO P4400.2, par. 504.

c. As of 3 March 1982, base maintenance operation possessed stock inventory cards on 2,241 line items of excess material with an onhand quantity of 100,194 units located in eight areas. Some examples are:

Description	Quantity on hand	Unit price	Total cost
1/ Window screen 35 1/8 x 49 3/8	898	$ 17.20 ea.	$15,446
2/ Air filter 9 x 20 7/8 x 1	1,696	1.28 ea.	2,171
3/ Air filter 9X 26 7/8 X 1	3,608	1.34 ea.	4,835
Unit heaters	7	530.25 ea.	3,712
Thermostatic trap (3/4 inch)	660	15.86 ea.	10,468
Condensing unit	1	2,297.00 ea.	2,297

1/ 300 on order for outstanding project.
2/ 1,056 on order for outstanding project.
3/ 1,002 on order for outstanding project.

Excess material retained for use on a future project is required to be accounted for. Our review showed that the accountability of excess material was inadequate, inconsistent among major staging areas, and ineffective in the control and management of the material. A detailed review noted the following:

(1) The Stock Inventory Cards, MCBCL Form 11011/2, did not contain all required and essential information such as the intended use (JON); the maximum date for retention; the National Stock Number (NSN), if applicable; the type of inventory; and unit cost. MO P4400.2, par. 604.2, requires appropriate records to be maintained on all excess material indicating as a minimum the description of the item, quantity, intended use (JON), and the maximum date of retention. We believe the Stock Inventory Cards should show all required information and other essential information such as unit cost and project number (JON) from which material is excess. This would eliminate duplicate entries currently made in the receipts and issue logbooks, and on the Stock Inventory Cards.

(2) During our review, we inventoried a total of 140 items located in the various staging areas. We found 34 instances where the onhand quantity shown on the Stock Inventory Cards did not agree with the physical inventory count. Some differences are shown:

Description	Quantity shown on Stock Inventory Card	Quantity on hand	Differences
1" Unions, black door	38 ea.	120	+ 82
Pipe, black, 1 1/2 heavy	140 ft.	84 ft.	- 56
Thermo-12, black insulation	456 ea.	271	-185
Clip, conduit support	160 ea.	77	- 83
Strap, rigid, 1 1/4"	60 ea.	64	+ 4
Floor cement, multi-purpose	37 gal.	39 gal.	+ 2

The primary reason for this condition was the failure to record receipts and issues of excess materials on the Stock Inventory Cards from the daily logbooks. We believe a more accurate and efficient procedure would be to record transactions directly to the Stock Inventory Cards and discontinue maintaining the daily logbook.

(3) A detailed review of the type of inventory and source of supply showed that a substantial number were items normally stocked by DSSC activity. We were able to identify 238 items to the DSSC's nomenclature (E04) file. Therefore, extreme care must be exercised by the Maintenance Officer to ensure the Work Management Branch does not hold excess material normally stocked by the DSSC activity, unless it meets criteria as stock authorized in MCO 4400.158, par. 3b(1).

Since emphasis has been placed on management of excess material, it is essential that adequate and accurate records be maintained.

Recommendation 5. MCB improve the control and management of excess material and salvage material by following specific procedures outlined in MCO 4400.158 and MO P4400.2.

MCB response. Concur. MCB agrees with the audit findings that the quantity of materials on hand cannot be managed efficiently and/or effectively with a manual recordkeeping system. Funds have been requested to acquire dedicated data processing for this purpose. Additionally,

stringent control of excess material has been established by providing secure storage and charging shop planner personnel to ensure proper control and utilization of the material. MO P4400.2 (Material Control) establishes stringent control procedures, some of which are difficult to achieve without an automated system. However, every effort is being made to meet these standards and will continue. Project material not used on specific JONs will be reviewed by shop planners to determine appropriate disposition (i.e., retention for use on another project or turn-in) and the JON annotated accordingly. The retained material will be monitored through the use of the Stock Inventory Card and whenever possible the origin of the material as well as its anticipated future use will be noted in the "Remarks" column of the card. The unit price will not be annotated due to the excessive research time involved in obtaining this data from DSSC and its questionable use within the division.

NAVAUDSVCSE comment. MCB's planned action to review specific JONs and monitor the excess material should improve the condition. However, requesting funds to acquire data processing equipment to control excess material, much of which should not be on hand, results in treating the effect and not the cause of the problem. By complying with current regulations governing the use of material on projects and turning in unneeded material, we believe the management problem of excess material will significantly diminish and negate the need for automated data processing equipment.

4. Training in the use of engineering performance standard for maintenance personnel is not adequate

a. Planners and estimators, maintenance inspectors, and maintenance and repair supervisors have not been provided all of the Engineered Performance Standards (EPS) training that is required. The lack of training has been caused primarily by the low priorities assigned to EPS courses and the failure to budget for the courses. Therefore, personnel responsible for inspecting, estimating, planning, and supervising maintenance work have not been adequately trained to use EPS in performing their assigned duties.

b. We determined that only 11 of 56 planners/estimators, maintenance inspectors, and maintenance and repair supervisors have received any of the EPS training required by MCO P11000.7B, pars. 2022.2d, 2022.2e, and 2022.3b. These paragraphs require EPS training as follows:

(1) Planners and estimators. It is mandatory that these personnel have specialized training in the use of EPS and that they are scheduled for retraining every 3 years (MCO P11000.7B, par. 2022.2e).

(2) Maintenance inspectors. These personnel should be trained in the use of EPS (MCO P11000.7B, par. 2022.2d).

(3) Maintenance and Repair Division supervisors. All supervisors should complete an orientation course in EPS (MCO P11000.7B, par. 2022.3b). Presently, there is no EPS course to fulfill this requirement. MCB should request orientation training for its supervisors.

Based on training records only four personnel have received EPS training since 1979 as follows:

Section	Number of personnel in section for EPS training	Number of personnel receiving training 1981	1980	1979	Prior to 1979
Planning and estimating	9	1	3	-0-	5
Inspectors	6	-0-	-0-	-0-	2
Maintenance and repair supervisors	41	-0-	-0-	-0-	-0-
Total	56	1	3	-0-	7

c. The BMD budgeted for 71 training courses with an estimated cost of $52,309 for FY 1982. Although 52 personnel needed EPS training, only five courses were included in the FY 1982 budget. We determined that 28 of the budgeted courses were funded at a cost of $18,883 but included only two EPS courses. Congressional interest in EPS utilization resulted in funds being added to the Marine Corps budget to ensure that newly developed EPS are utilized and monitored as stated in Marine Corps Bulletin 4856, par. 2, dated 10 November 1981. EPS training requirements should be included in the budget and given a high priority. Improved planning and estimating can lead to improved productivity.

Recommendation 6. MCB include all known EPS training requirements in the annual budget submission and give EPS training the priority needed to meet the requirements of MCO P11000.7B, pars. 2022.2d, 2022.2e, and 2022.3b.

MCB response. Concur. MCB has placed considerable emphasis on EPS utilization. This is evidenced by the fact that EPS utilization increased from 36 percent in 1980 to 66.9 percent in 1982. These percentages were determined from surveys by an outside consultant firm in 1980 and a Headquarters, Marine Corps representative in 1982. Both surveys were highly complimentary of the quality of Marine Corps EPS estimates and the Headquarters, Marine Corps representative further commented that the MCB EPS utilization is the highest in the Marine Corps.

EPS training for planners and estimators is mandatory and 4 of the 10 planners and estimators are current in their training, i.e. have attended training during the past 3 years. Three planners and estimators should have received refresher training in 1981 but are scheduled for this training in 1982. The three remaining planners and estimators were all selected for their positions within the past 6 months and two of these are scheduled for basic EPS training in 1982. The remaining one, selected 2 March 1982, will be scheduled to attend the next available course.

EPS training for inspectors is not mandatory. However, all MCB inspectors attend building maintenance inspector training which is required. MCB does not consider EPS training for inspectors high priority when compared to other training. Inspectors' estimates do not require EPS.

An EPS refresher training course was conducted by Atlantic Division, Naval Facilities Engineering Command onsite at Camp Lejeune, North Carolina in December 1978. During this course approximately 20 shop supervisors received EPS orientation (however, apparently no record of this was made in their personnel files). An EPS refresher training course is scheduled onsite in September 1982 and shop supervisor EPS orientation will be included.

MCB will continue to place emphasis on EPS utilization and training requirements prescribed by MCO P11000.7B will be included in annual budget submissions.

NAVAUDSVCSE comment. Action planned by MCB should ensure required EPS training is provided for maintenance personnel.

5. Correcting a local data processing program for summarizing labor and material for completed specific job orders

a. A local data processing program that summarizes labor and material for completed specific job orders is not always correct. Apparently, the problem is caused by deficiencies in the program which have not been identified and corrected. Due to these errors, reports from the program have limited value to management in determining reasons for unacceptable variances on completed specific job orders.

b. Variance reports are required when estimated or actual labor hours exceed 80 hours or actual material cost exceeds $2,000 and the difference estimated and actual hours or material cost are less than 91 or greater than 109 percent as stated in MCO P11000.7B, par. 5030.2c. To assist management in making required reviews of variances, a local data processing program (B7500 JIB) was developed to summarize hours and material cost by JON and work center. We found discrepancies in labor hours and material cost between the local program and the system program (Report Number 3 - Completed Specific Job Orders). Because of these discrepancies, the local report has limited value. Some examples of discrepancies between the two reports are:

		Report Number 3 30 Sep 1981		Local report B7500 JIB 24 Nov 1981		23 Dec 1981	
JON	Work Center	Labor hours	Material	Labor hours	Material	Labor hours	Material
1232	51	268	$4,089.69		$3,833.21	229	$4,151.00
	52		268.44		186.14		186.14
	63		235.53		280.04		191.02
	93		5,730.97		5,398.42		5,398.42
1257	41		3,586.75		3,638.15		
1231	51		1,742.84		1,627.01		

In order for the local report to be of most value to management, the reasons for these differences should be determined and corrected.

Recommendation 7. MCB incorporate the necessary corrections in the local computer program (B7500 JIB) which summarizes labor hours and material cost for completed specific job orders and use to make variance reviews as required by MCO P11000.7B, par. 5030.2c.

MCB response. Concur. The Director, Consolidated Automated Services Center has been requested (BMO letter MAIN/RES/jik dated 5 May 1982) to evaluate the deficiencies to determine if adjustments can be made to the local program to correct the errors or if revision of PRIME is required. Estimated completion is 15 August 1982.

NAVAUDSVCSE comment. Action taken by MCB should correct the cited condition.

SECTION C
STATUS OF RECOMMENDED ACTIONS
AND MONETARY SAVINGS

Finding No.	Recomm. No.	Recomm. Pg.	Subject	Status	Action Command	Target Compl. Date	Monetary Savings $000 Cat.	Amt.	Appropriation
1	1	4	Billing MWR activities and private organizations for services provided	Open	MCB	11 Jun 1982	A1 A2	$157 96	17-1106.2720 17-1106.2720
	2	4	Maintaining essential feeding records at COM(O)	Open	MCB	11 Jun 1982			
2	3	8	Reviewing unacceptable variances for specific job orders	Open	MCB	11 Jun 1982	C		
	4	8	Maintaining workpapers and files on variance reviews	Open	MCB	11 Jun 1982	C		
3	5	10	Controlling and managing excess	Open	MCB	11 Jun 1982	C		
4	6	12	Increasing EPS training	Open	MCB	11 Jun 1982	C		
5	7	14	Correcting a local data processing program	Open	MCB	15 Aug 1982	C		

BASE MAINTENANCE DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

MAIN/RES/jik
7500
21 Sep 1982

From: Base Maintenance Officer
To: Distribution List

Subj: Draft Navy Audit Comments; response to

Encl: (1) Draft Navy Audit Comments

1. Draft comments from a recent Navy Audit Team inspection are contained in the enclosure.

2. Addressees will provide written responses to individual comment items as noted below NLT 12 October 1982.

	Audit Item	Action
a.	Exceeding range for service work	Opns karen
b.	Reducing turn around on specifics	" " RMD
c.	Failure to schedule specifics	" " Jesse
d.	Insufficient use of specifics	" "
e.	Generating sufficient work	" "
f.	Inadequate estimates — Answered previously	" "
g.	Assigning priorities	" " karen
h.	Inadequate controls (motor repair)	M&R
i.	Excessive labor costs	" "
j.	Labor required for maintenance work	" "
k.	Review of completed specifics — Answered previously — add update	Opns
l.	Procedure for customer complaints	" "
m.	Applying EPS to service tickets	" "
n.	Identifying rework	M&R

M&R

R. E. SCALES
By direction

DISTRIBUTION:
ABMO
→ Dir, Opns Br
Dir, M&R Br

Exceeding the desired range for service work

I a. The desired range of 10 to 15 percent of the total labor hours for service work was exceeded by ~~67~~ 87 to ~~196~~ 113 percent during the period from 1 October 1979 thorugh 30 June 1982. This signifies a large portion of the maintenance effort is directed towards work that is relatively minor in scope. These variances were reported monthly in the Facilities Mainitenance Management Report No. 6, but no comments or recommendations for improvements have been received from Headquarters, Marine Corps.

b. Our review of service work performed by all work centers, including housing, for FY's 1980, 1981 and the first three quarters of 1982 as a percentage of the total labor hours expended were:

Time Period	Total Hours Service Work	Percentage ~~of~~ to productive Total Labor Hours
FY 1980	261,048	~~24.6~~ 31.6
FY 1981	253,934	~~29.6~~ 31.9
YTD June 1982	176,275	~~25.44~~ 28

This large amount of service work could be reduced through controlled maintenance inspections and more work translated into specific jobs and scheduled for performance during the year.

c. Report No. 6 is prepared monthly as required by MCO P1100.7B, appendix C-7 and forwarded to Headquarters, Marine Corps for review. Comments or recommendations concerning excessive service work as a percentage of the total labor effort has not been received at MCB, Camp Lejeune. If the present ~~25~~ 28 to ~~30~~ 32 percent of total productive labor for service work is acceptable, a change to MCO P11000.7B should be made, or if unacceptable, recommendations should be made for improvements.

Recommendation . CMC review the Facilities Maintenance Management Report No. 6 and comment or make recommendations for improvement.

Recommendation ___. MCB reduce service work to a level that is acceptable in accordance with MCO P11000.7B, Appendix C-7.

Reducing turn around time on specific jobs

II a. The BMD, MCB, Camp Lejeune needs to establish procedures to record work flow for each phase of the work process for specific jobs to ensure that work flows smoothly and efficiently. These records should be reviewed to determine if turn around time is minimized from the receipt of the work request to the completion of the job. Our review of turn around time showed that about 8 months elasped from receipt of the work request to completion of work. The average time required to complete the actual work was 10 days. Although there are no firm goal for each phase of the work process, it appears the turn around time is excessive.

b. From a random selection of 50 specific jobs (work generated or Code 05) that were completed during a two month period ending 30 April 1982, we were able to determine the turn around time for 24 maintenance and repair jobs. The turn around time on these jobs ranged from 29 days to 569 days and average 256 days. More than 65 percent of the jobs took more than 6 months to complete:

Elapsed Time (days)	Number of Jobs	Percent of Total	Average Elapsed Time (days)
1-30	1	4%	29
31-180	6	25%	114
181-360	13	54%	272
Over 360	4	17%	475
Totals	24	100%	256

c. A review of time elapsed between each phase of the work process for the 24 specific jobs showed certain factors attributed to the long turn around time:

Each Phase of the Work Process	1/Number of Jobs	Range of Days in Work Process	Average Elapsed Time (Days)
Date of work request - to date work submitted to P&E	22	0-73	14
Date work submitted to P&E to-date P&E completed estimate	22	0-168	21
Date P&E complted estimate - to-date material ordered	17	9-54	24
Date material ordered - to-date material received	19	26-365	148
Date material rec'd - to-date job started	18	1-238	63
Date job started - to completion of jobs	22	1-67	10

1/ Number of jobs of which complete information and dates were available.

Further review showed that certain elements between each phase of the work process effected time elapsed:

(1) Time elapsed to perform inspection on customer work request which was not on the annual inspection plan.

(2) Backlog of work in certain craft areas of planning and estimating section.

(3) Allowing addition days to be assigned to the material required delivery date (RDD).

(4) Requirements for material having a long lead time.

Currently, there are no locally developed guidelines to record and evaluate turn around time for specific jobs or each phase of the work process to ensure that processing inefficiencies are recognized.

Recommendation . MCB take corrective action to improve BMD responsiveness to specific jobs of maintenance and repair work to Marine Corps facilities.

Recommendation . MCB establish a method of recording, measuring and evaluating turn around time for specific jobs to aid in recognizing work process inefficiencies.

Failure to properly schedule specific job orders

III a. The Base Maintenance Department (BMD), Camp Lejeune, N.C., is not scheduling available manhours for specific work at the prescribed 75 percent level. Our review disclosed that as few as 51 percent of the available manhours had been scheduled for specific work. In addition, we noted computations for scheduling are not in accordance with current directives. Failure to adequately schedule specific work may be due to the high volume of service work completed. Scheduling specific work at a reduced level could result in inefficient utilization of available manhours and increased difficulty in accomplishing the annual maintenance plan.

b. Our review of the master schedules for work centers 41, 43, and 51 for the four weekly periods ending 30 April 1982 indicated that BMD is not scheduling specific jobs at the prescribed 75 percent level as shown below:

	Percentage of available manhours scheduled		
Week ending	Work Center 41	Work Center 43	Work Center 51
9 April 1982	85	54	71
16 April 1982	69	51	63
23 April 1982	70	74	77
30 April 1982	77	60	66

MCO P11000.7B, Real Property Facilities Manual, VOL III, par. 4061.1, states that 75 percent of available manhours should be scheduled for specific work. We also determined the BMD is not computing the percentage to be master-scheduled properly. First, BMD is using 70 percent verses the 75 percent as prescribed in MCO P11000.7B, par. 4061.1. Second, BMD is not subtracting anticipated leave in deriving the total manhours available for master-scheduling. MCO P11000.7B,

Appendix B-9, indicates that to determine manhours to be master-scheduled, compute total manhours and subtract leave, supervision, non-productive time and standing job orders.

c. Our review of the workload for work centers 41, 43 and 51 showed that BMD is generally exceeding the 25 percent that should be available for service work. Results are shown below:

	Percentage of available manhours expended		
Week ending	Work Center 41	Work Center 43	Work Center 51
9 April 1982	26	41	32
16 April 1982	37	32	47
23 April 1982	26	35	23
30 April 1982	34	31	37

MCO P11000.7B, par. 4061.1, states that 25 percent will compensate for urgent jobs, service work, and unforseen events which would normally disrupt the scheduled specific work. We believe the large volume of service work being accomplished by the parent shops is due to the disestablishment of the emergency service center for the central area of MCB. MCO P11000.7B, par. 2022.3d, requires an emergency service center for all Marine Corps activities.

Insufficient use of specific job orders

IV. a. MCB is not following the prescribed maintenance policy of utilizing specific job orders to the maximum extent. Maintenance and repair is being primarily accomplished under emergency/service work and during cyclic maintenance on standing job orders. This could result in inefficient utilization of personnel and result in higher maintenance costs.

b. Our review of work accomplished during the nine month period ending 30 June 1982 showed that 27.5 percent of the productive manhours were expended on specific job orders. Results are shown below:

Work Catagory	Manhours	Percentage
Emergency	35,401	5.6
Service	176,275	28.0
Standing job orders	244,536	38.9
Specific job orders	173,222	27.5
	629,434	

MCO P11000.7B, Real Property Facilities Manual, Volume III, par. 3003, states that the basic work unit is the specific job order which is identified by a continuous inspection program. The purpose of specific job orders through the an inspection program is to detect deficiencies in early stages, reduce breakdown and cost of repairs and plan for efficient utilization of labor. Any work other than the specific job order must be minimized and performed only when fully justified on a cost-effectiveness basis, because it is essential to the mission of the share activity, or because it is an emergency. This category includes: (1) emergency work, (2) service work, (3) work request, (4) preventive maintenance, (5) cyclic maintenance,

(6) other standing job order work and (7) minor construction. Maximum use should be made of specific type work in order to best utilize personnel and keep maintenance cost to a minimum.

MCB is not generating sufficient work from continuous inspecitons

V a. The Base Maintenance Department (BMD) is accomplishing much of their work on an intermittent breakdown basis rather than on the basis of the continuous inspection program. We determined that only 11.5 percent of the in-house maintenance effort is being generated from the continuous inspection program. The continuous inspection program is the principle method to generate work under the controlled maintenance program and should provide a constant flow of work and efficient utilization of maintenance resources.

b. We reviewed 50 specific job orders, consisting of 17,825 estimated manhours, which were started and completed during FY 1982. We compared these jobs and manhours with work requirements shown on the continuous inspection program. Our analysis of these 50 job orders showed that 26 jobs consisting of 7,452 manhours (41.8 percent) had originated from the continuous inspection program. During the first nine months of FY 1982 MCB expended 173,222 manhours on specific job orders. If the result of our sample of 50 specific job orders is representative, then BMD expended during the first nine month of FY 1982 about 72,407, of the total 629,434 available, manhours on specific work that had originated through the continuous inspection program. This equates to 11.5 percent of the total productive manhours being expended for specific work that originated through the continuous inspection program. MCO P11000.7B, Real Property Facilities Manual, Volume III, par 3020.2c, states that the purpose of an inspection program is to detect deficiencies in the early stages of development, reduce the number of breakdowns and cost of repairs, maintain a more constant flow of work, and plan for efficient utilization of labor. The full benefits of the controlled maintenance

management program are realized when the maximum amount of work results from the continuous inspection program. Work generated primarily from sources other than the continuous inspection program results in much of the maintenance being accomplished on an intermittent, break-down basis and negates much of the time and effort expended on continuous inspections.

VI

1. Inadequate estimates of material for projects has led to the generation of excess material

a. A review of 20 completed projects with material etimated totaling $95,409 showed material requirements were overstated by $55,075, or 58 percent. At the time of our review BMD, Camp Lejeune had 2,241 line items with about 100,300 units on hand stored in maintenance shops and warehouses which is excess. The generation of excesses increases the cost of maintenance and distorts the cost accounting records for both the job the material was drawn and the job it will be used on.

b. The BMD has continued to generate a large volume of material due to over estimating material requirements for specific job orders. The Planning Estimating (P/E) Section is responsible for determining the type and amount of material needed to accomplish maintenance projects. Material for projects is ordered by shop planners based on the P/E estimate. Material ordered but not used on the project and which cannot be returned to shop stores for credit is stored in maintenance shops or warehouses and used on future jobs. Maintenance Management reports which measures P/E performance do not take this material in consideration. This results in the overstatement of one project and an understatement of another. To determine the adequacy of material estimates, we selected 20 completed projects and made a physical review of the facilities and interviewed maintenance personnel, comparing material actually used with material on the work order. Estimated material requirements totaled $95,409 with actual material used $40,334, or 42 percent, of the estimate. We found that material estimated and ordered for periodic preventive maintenance (PM) on facilities were the same for each PM and material used varied significantly from the estimate. An example is:

Second Quarter PM of Enlisted Men Dining Facilities

Project G747

Item	Quantity of material Estimated	Used	Unit Price	Excess Quantity	Excess Amount
Door closer	15	6	$31.21	9	$ 280.89
Foot bolt	16	6	15.73	10	157.30
Window lock sash	100	50	3.58	50	179.00
Screen door spring	50	0	.44	50	22.00
Aluminum screen wire	2	0	29.00	2	58.00
Lumber 2" X RW	400	100	2.26	300	678.00
1/ Window screen 35 1/8" X 49 3/8"	300	0	13.08	300	3,924.00
Window screen 35" X 37"	80	0	15.00	80	1,200.00
Right-hand window latch set	36	0	10.00	36	360.00
Left-hand window latch set	36	0	10.00	36	360.00
Totals	1,035	162		873	$7,219.19

1/ On 18 March 1982 the purchase order was still outstanding, project was completed 5 March 1982. On hand on this date were 898 (35 1/8" X 49 3/8") and 160 (35" X 37") window screens from previous quarterly PMs.

On 3 March 1982, BMD had 2,241 line items with 100,294 units of excess material on hand. We were unable to determine the value of this material due to a unit price not being on the inventory card. There was also 311 line items of material on hand in shop stores for

completed projects which had not been picked up. Some of this material was for projects which were completed as far back as FY 1979. In an effort to control excess material the Work Management Branch increased its staffing by three shop planners at an annual cost of $103,264. NAVCOMPT Manual 034001 requires all Navy-owned material located throughout the naval shores establishments be included in the inventory accounts of an accountable officer with certain exceptions, not herein applicable. MCO P11000.7b, par. 4080.3c, states that material in excess of that required for a specific job shall be returned to shop stores for credit to the material costs for that job.

c. During our review we noted the following conditions which could result in inadequate material estimates:

(1) The inspections and cost estimating of projects are performed by separate sections within BMD. The inspection section performs facilities inspections for maintenance and repair. The P/E Section prepares the cost estimate from a written inspection report. Having the same individual who made the inspection make the cost estimate could improve material estimates.

(2) Estimates are prepared based on old inspection reports. In many instances work has been accomplished on Emergency Service work tickets. A reinspection should be made prior to preparing the estimate and ordering material.

(3) Material for PMs should be drawn from shop stores on an as needed basis rather than orderingf based on an estimate. Overstatement of material requirements which subsequently become excesses and failure to return material to shop stores for credit reduces available funds in the current operating budget.

Recommendation 1. MCB establish a detail plan of action to improve the adequacy of material estimates ensuring that appropriate actions are taken to reduce excesses and keep excesses at a minimum in the future.

MCB Response. Concur with that part of the recommendation to reduce excesses to a minimum. However, MCB does not agree that poor material estimates have led to generation of excess material. MCB has taken decisive action to control and reduce excess materials, including an improve accountability system and a new maintenance order requiring stringent control of management of materials.

The audit selected 20 projects known to have unused materials to conclude that inadequate material estimates have resulted in the buildup of excess materials. Of the 20 projects, 5 were preventive or cyclic maintenance job orders, while the remaining 15 were specific job orders. Eight of the 15 specific jobs were for replacement of steam and condensate piping and two others were for similar work on piping systems. It is extremely difficult to determine the exact scope of repairs from external inspection of steam, condensate, and other piping systems jobs. The estimator uses "worst case" conditions when planning and estimating this type of work since once the work is begun it must be completed or service to the building or facility cannot be restored.

Cyclic and preventive maintenance work is estimated using average usage of labor hours and materials. Quarterly job orders use this data unless the estimator is advised by the shops or inspectors that there is reason to change. Base Maintenance re-estimates standing job orders every 3 years. Control of materials for quarterly jobs is

exercised by the shop planner who screens material lists against onhand material prior to ordering. However, because of the long lead time for material procurement, material required for the following quarter must be ordered before the work is completed for the current quarter. This could result in materials being on order and like materials being left over at the end of the current quarter. This situation is compounded when high priority work causes cancellation of cyclic maintenance.

MCB will insure that Planners and Estimators, Shop Planners and Shop Foremen constantly review material requirements for preventive maintenance and cyclic work in order to hold unused material to a minimum. Further, cyclic and preventive maintenance job orders will be re-estimated annually versus every 3 years.

NAVAUDSVCSE comment. MCB statement that the projects selected were known to have unused materials is correct. Our objectives were to determine why the material was unused and what disposition would be taken. Our conclusions are (1) unused material was caused by over estimating requirements and (2) no specific plans to use the material for future jobs or turn material in for credit were made. MCB's planned action to prepare estimates annually for cyclic and preventive maintenance should improve that condition. However, using current procedures and methodology, the generation of excess materials due to over estimating specific job orders will continue. We believe additional emphasis on the accuracy of material requirements for specific job orders is needed. The generation of 2,241 line items of excess material now located at BMD and an additional 311 line items at shop stores from over estimating indicates a problem that will continue unless corrective action is taken by BMD. We believe CMC should review this finding and the response from MCB with a view of

providing MCB with recommendations which will improve material estimates.

Follow-up review. A follow-up review of excess material was made during the week ending 20 August 1982 and showed that efforts were being made to use the materials which were excess. Although efforts were made to use this material by checking what was available in the storage areas, material was still being generated because of over estimates of material requirements.

VII

Assigning priorities to maintenance jobs.

a. Base Maintenance Department (BMD) has assigned priorities to maintenance jobs that do not meet the criteria described in NAVFAC MO-321, para. 6.4.3. Our review of maintenance jobs scheduled for the month of May 1982 showed that 23 percent of the specific jobs and minor work orders were planned and scheduled using the priority designator "expedite". The improper use of priority designator "expedite" has substantially effected the orderly scheduling of work that is essential in the maintenance management program. As of 12 July 1982, there were 115 job orders in which all needed material had been received that were awaiting scheduling. These 115 job orders would require 16,107 labor hours with an estimated total cost of $299,341.

b. We reviewed 74 specific job orders and 130 minor work orders contained in four weekly master schedules prepared during May 1982. Out of the 204 scheduled job orders we determined that 47 (23 percent) had been designated as priority jobs by indicating "expedite" on the face of the job order assigning priorities to jobs. MCO P11000.7A does not contain instructions for assigning priorities to jobs. Therefore, we used the criteria outlined in NAVFAC MO-321, (Maintenance Management of Public Works and Public Utilities). NAVFAC MO-321, para 6.4.3, states that the priority designation should only be used if the work is essential to, and urgently required for carrying out the assigned mission of the activity. Our review showed that job orders were being "expedited" for reasons such as (1) short notice from requestor to perform work, (2) poor planning of seasonal work, (3) testing of new products, (4) replenishing fabricated stocks that have deminished and (5) command interest.

Some examples are:

Job Order Number	Job Description	Reason for "Expediting"
3808	Repairs to parade field	To repair holes and ruts for safe marching
1813	Repair playground	Work request submitted late
3617	Refinish gym floor	To test new type of floor finish.
3759	Repair road and gravel	Erosion control
1347	Install window air conditioner	R-1 new work

Many of the reasons for expediting job orders at MCB do not meet the criteria stated in NAVFAC MO-321, para. 6.4.3. Job orders designated as "expedite" for convenience, comfort and/or appearance are unacceptable. NAVFAC MO-321, para. 6.4.3 states that when a priority is considered appropriate, it should be recommended to the Base Maintenance Officer for his approval. It should be understood, however, that such approval will be granted only in unusual cases. We believe expediting 23 percent of the specific job orders is excessive, and could be reduced through proper planning by BMD and the commands they support.

c. Job orders designated "expedite" should be essential and urgently required work. Our review of the time lapsed between the shop date for scheduling work and completed date or date of auditor's review showed a range from three to 610 days for completion. For the 47 expedites reviewed, we found an average time of 117 days or 4 months for completion. Some examples are:

Job Order Number	Job Description	Date Received In Shop	Completed Date	Dates Lapsed
3111	Alter piping	9-25-80	5-28-82	610 check
1262	Construct offices	3-17-81	5-28-82	437
4055	Prepare Ballfields	5-5-81	5-28-82	388
3180	Repair head	11-12-81	5-14-82	183

A review of eight job orders requested in fiscal year 1981 showed that various factors cause delay in work such as amendments changing the scope of work or changes in the specifications and/or type of material and equipment required; material not received in timely matter; and seasonal characteristics of work.

d. The improper use the priority designator "expedite" has substantially effected the orderly scheduling of work that is essential in maintenance management. Processing larger numbers of priority job orders, causes the master scheduler to reschedule or carry over other specific job orders. The end results can be noted by the number of specific job orders awaiting scheduling. Our review showed 115 specific job orders awaiting scheduling, of which 44 of the 115 were specific job orders or projects totally 11,051 labor hours that had passed the projected starting date. Further review showed that 23 of the 44 specific job orders had passed the projected starting date assigned by two or more months.

Recommendation. MCB properly utilize the one priority designation, "expedite", as required by criteria described in NAVFAC MO-321, para. 6.4.3.

Recommendation. CMC develop a priority system for accomplishing maintenance on facilities based on urgency of required maintenance.

VIII

Inadequate controls over the electric motor repair BPA

a. Our review of the Blanket Purchase Agreement (BPA) for electric motor repairs indicated that control procedures used by MCB are inadequate. This is caused by the failure of MCB to establish a clear separation of duties for the individual actual administering the agreement. Failure to provide proper control procedures could result in the Government paying for services not received.

b. Our review of control procedures for the administration of the BPA for electric motor repair showed that one person is responsible for the following: (1) determining what motors and how many motors are to be repaired by the contract; (2) notifying the contractor when to pick up motors; (3) issuing the motors to the contractor for repair; (4) receiving the repaired motors from the contractor; and (5) signing the contractor's invoice as receiving the motors. This procedure does not afford the Government the assurance that all services have been received. MCO P4200.15E, par 0677 states that the minimum control should provide that the person placing the call does not perform the function of receipt, inspection, and acceptance.

Excessive labor costs to repair motors

IX a. The time actually spent by MCB personnel to repair motors is excessive. Our review showed that actual hours expended exceeded the EPS standard hours by ~~230~~ 254 percent. In addition, we determined that output generated by the Electrical Motor Repair Shop is inadequate to support shop retention. Failure to review the work completed and the amount of time to complete the work has allowed this to go undetected. Excess time expended to repair motors and insufficient output results in additional cost to the Governemtn and improper utilization of personnel.

b. Our review of the Repairman's Daily Log (MCBCL 11014/14) for personnel assigned to repair motors indicated that the standard hours were generally being exceeded. We were able to match the Repairman's Daily Log to ~~24~~ 23 Maintenance Tickets and determined that ~~16~~ 15 (~~66~~ 65.2 percent) exceeded the standards. Some examples are shown below:

Date	Ticket Number	Actual Time	Standard Time
7-27-82	34439	6	1
7-30-82	48215	8	1
8-4-82	47798	10	2
8-10-82	47767	~~18~~ 19	2.2

MCB personnel expended a total of 110 hours repairing those ~~24~~ 23 motors when the total standard time allowed was ~~34.8~~ 31.1 hours or ~~230~~ 254 percent above standard.

c. Our review of the output for the Motor Repair Shop for the seven month period ending July 1982 showed that about 145 motors had been repaired by MCB personnel. Because labor and materials are generally charged to standing job orders we were unable to identify total cost to repair those motors. However, total labor cost for the Electricial Equipment Repairer who is assigned full ~~time~~ time to the repair

shop for the 7 month period was $17,308, for a per motor labor cost of $119.37. This does not include any materials or additional labor that was assigned on an as-needed basis. Our review of a BPA for motor repairs for the same 7 month period showed that the contracter repaired 114 motors at a total cost of $12,123.24, for a per motor cost of $106.34, materials included.

d. The Electrical Shop is now experiencing a large ticket backlog, as of 24 August 1982 there were 339 tickets awaiting completion. We believe that by increasing the number of motors sent to the contractor would currently make available a WG-09 and WG-05 electricians for ticket work and could result in savings to the Government.

Recommendation . MCB increase the utilization of the BPA for the repair of electrical motors thereby making available two electricians for ticket work and reducing costs.

I. Labor required to do maintenance work is not accurately reported.

a. The time recorded by maintenance personnel to show labor hours used for maintenance work is inaccurate. We found errors in time shown on labor distribution cards (MCBL 7410) and the amount of time and time of day recorded on maintenance tickets (U. S. Government Printing Office 1982 - 541-240). These errors, which are caused by inaccurate time keeping by maintenance personnel, distort productivity statistics and result in inaccurate labor charges to job order numbers (JONs).

b. We observed work accomplished on 33 maintenance jobs and verified actual time to time recorded on maintenance tickets and labor distribution cards. Our observation and analysis showed the following discrepancies:

(1) The amount of time for 17 jobs (consisting of 9 job orders) was verified to labor distribution cards. The labor distribution cards for these 9 JONs did not agree with the time we recorded or the time recorded on maintenance tickets by maintenance personnel. The errors varied from 15 minutes to 8 hours per job.

(2) The amount of time including travel recorded by maintenance personnel on 11 maintenance tickets varied from 15 minutes to 1 hour and 55 minutes when compared to the actual time required to do the job as observed by the auditor. We observed 9 additional jobs for which maintenance personnel recorded no time on maintenance tickets. The time required to complete these 9 jobs ranged from 7 to 40 minutes. We also noted the time of day recorded on 16 maintenance tickets was not the same time we observed the work accomplished.

Examples of these different discrepancies are as follows:

Ticket		Time recorded on ticket			Time Observed by Auditor			Time on Labor Distribution Card
Number	JON	Start	Stop	Minutes	Start	Stop	Minutes	Minutes
1/ H32588	Y632	-0-	-0-	-0-	0952	0959	7	
1/ 080777	Y632	-0-	-0-	-0-	1050	1100	10	
				-0-			17	60
1/ 21735	P365	1230	1315	45	1257	1344	47	
		1600	1615	15	1425	1438	13	
				60			60	-0-
1/ ~~Y513~~ H21584	~~1030~~ Y573	~~1300~~ 1030	1300	120	1045	1200	75	
					1230	1510	160	
				120			235	150
2/ 1202		0800	1630	960	0800	1200	480	960
2/ 3546		-0-	-0-	-0-	0900	1630	420	-0-

1/ Family housing maintenance.

2/ Excludes 30 minutes for lunch.

c. The validity of the MCB cost account system depends on accurate and complete recording of hours for every job order. The job order is the basis of reports submitted to higher authority, analysis of labor cost and man-hours required for local planning, and determines the funds to be charged for labor cost as provided by BO 7420.2C, par. 3. Work center heads are responsible for ensuring that a time card and labor distribution card is maintained daily for each employee as required by par. 5.d.

Recommendation. MCB require personnel to accurately report labor hours as required by BO 7420.2C, pars. 3 and 5.d.

MANAGEMENT RESPONSES AND NAVAUDSVCSE COMMENTS

Comp Legend / not on mine here

XI

4. Review of completed specific job order estimate and performance variances 4

a. The level of performance required to accomplish specific job orders generally exceeded acceptable variances from estimated man-hours or material cost. Variances that exceeded authorized limits for completed specific job orders were not always reviewed or were not thoroughly reviewed to determine the reason for the variance. Files were not maintained to support conclusions reached and management was not analyzing variances on job orders reviewed. These problems were caused by inadequate estimates; inadequate performance; a combination of these two; and inadequate job order variance reviews. Knowing when to order material and schedule work is made more difficult because of the unacceptable variances. Unless unacceptable variances are thoroughly reviewed and supporting files maintained, causes, trends, and corrective actions can not be determined. Similar conditions were reported in Audit Report C42837 dated 27 October 1978; however, improvements have been made since that audit.

b. Variance reports are required when actual material cost exceed $2,000 or when estimated or actual man-hours exceeds 80 hours for any work center and the variance is greater than 109 or less than 91 percent as stated in MCO P11000.7B, par. 5030.2C. The material cost or man-hours for 210 completed specific job orders during 5 months ended September 1981 met the review criteria. A variance report was required for 124 (59 percent) because of excessive variances in man-hours or material cost. We reviewed these 124 job orders and found the following:

Match with item #6 of

(1) A total of 58 job orders had not been reviewed. Thirty-five of these job orders for July were not reviewed because of data processing problems that summarizes labor and material for completed specific job orders. However, fiscal and cost accounting records could have been used to make the review. The remaining 23 were overlooked during the reviews which were made. We determined that none of the unacceptable variances for work center 80 (Utilities) were being reviewed. Examples of job orders not reviewed follows:

Job order number	Work center	Man-hours	Material cost
1015	52		
Estimated		32	$1,392.00
Actual		35	2,188.39
Percentage		109	157
4071	61		
Estimated		40	100.00
Actual		88	102.90
Percentages		220	102
7429	71		
Estimated		289	-0-
Actual		372	-0-
Percentages		128	-0-

Estimated	16	6,750.00
Actual	16	5,209.60
Percentage	100	77

(2) MCB reviewed 66 of the 124 job orders with unacceptable variances. Our analyses of the eight variance reports made for September 1981 showed the reviews were not made in enough detail to be conclusive. We also found that workpapers or files were not maintained to support the conclusions reached. Monthly meetings between the operations officer, assistant or facilities maintenance officer, and director of the maintenance and repair division were not held to review variance reports, analyze trends, and initiate corrective action as required by MCO P11000.7B, par. 5030.2C. Workpapers or files supporting variance reports should be available for use by management during the monthly meetings. Two examples of reviews made are:

Job Order 1018, work center 62, Material estimated $2,352; Actual material cost $3,322.67; Percentage of estimate 141.3 percent. The variance report stated the reason for the difference was computer error and price increases. We did not find a computer error. There were some price increases totaling $392.28. Some of the discrepancies we found were: (1) A total of $1,159.70 was charged to the job order but was not included in the estimate; (2) A total of $461.52 was estimated and used

but not charged to the job order; (3) A total of $230.22 was charged but not used on the job; and (4) A total of $28.82 was estimated but not charged.

Job Order 1256, work center 41. Material estimate $3,167; Actual material cost $4,736.49; Percentage of estimate 149 percent; Estimated labor 248 hours; Actual labor 208 hours; Percentage of estimate 83 percent. The variance report stated the reason for the difference in labor was that the labor was overstated and an admendment was not turned in. This appears to be an accurate statement. The reason given for the material difference was that one item of material was overcharged by the computer. We found these discrepancies: (1) The job order was overcharged $1,759.73 for one line item; (2) A credit given for one line item was understated by $185.94; (3) The job order was charged once for one line item but credit was given two times for a total of $51.40; (4) The quantity required for one line item was overstated 18 percent for a total of $11.80; and (5) A total of $7.75 was used but not estimated.

Recommendation ~~7~~ 1. MCB review all unacceptable variances for completed specific job orders as required by MCO P11000.7B, par. 5030.2C.

Recommendation ~~8~~ 2. MCB maintain workpapers and files to support conclusions reached for man-hour and material cost variance reports and hold monthly meetings to review the variance reports, anlayze trends and initiate corrective action as required by MCO P11000.7B, par. 5030.2C.

MCB response (Recommendations ~~7~~ 1 and ~~8~~ 2). Concur. As indicated in the audit findings, improvements have been made since the last audit in 1978. MCB recognizes the benefits to be derived from review of unacceptable variances and maintenance of workpapers and files sufficient to support conclusions reached. Increased emphasis and attention has been directed to this areas and will continue.

NAVAUDSVCSE comments (Recommendations ~~7~~ 1 and ~~8~~ 2). Actions taken and planned by MCB should improve variance reviews.

c. The above finding was included in Audit Report C42862 which is the publication phase. MCB concurred with this audit finding. The command's reponse to the finding indicated that corrective action was taken on 6 June 1982, stating that MCB recognized the benefits to be derived from review of unacceptable variances and maintenance of workpapers and files sufficient to support conclusions reached. MCB further stated that increased emphasis and attention had been directed to this area and would continue.

d. A follow-up review completed on 25 August 1982 showed a decrease in emphasis and attention given to job orders with unacceptable variances. At the date of our review 178 job orders with unacceptable variances from November 1981 through July 1982 required review and none had been reviewed. MCB personnel stated again that they recognized the value of reviewing job orders with unacceptable variances. However, because of a lack of personnel resources, reviewing unacceptable variances had to be secondary to processing normal work flow. Unacceptable variances are required to be reviewed to determine causes, trends, and required corrective actions.

Establishing a procedure for registering customer complaints

a. The Base Maintenance Department (BMD) does not have a procedure established whereby customers are provided a central contact point to register complaints or completed work. Estblishing a central contact point to register and record customer complaints would not only facilitate management in identifying possible problem areas but would also show a willingness of BMD to maintain the best of relations with all customers.

b. Currently, customer complaints are primarily received by the BMD work reception section and then referred to the inspection branch or directly to the responsible work center depending on the nature of the complaint. No records of complaints are made by either the work receiption section, inspection branch, or work center for later evaluation by management. When work involves 80 or more hours and two or more shops a Quality Control/Job Coordination Form is prepared whereby the customer is given the opportunity to register a written complaint. However, customers receiving work or service of 79 or less hours are not provided this same opportunity. A compiaint registering procedures providing a central control point to record all complaints could be incorporated into the Base Order P11014.1G which outlines procedures for requesting work.

c. Establishment of a central control point to register and record customer complaints would aid management in identifying possible problem areas as well as improve relations with customers by providing an avenue for registering complaints.

Recommendation . MCB establish a central contact point to register/ record customer complaints.

XIII Applying Engineered Performance Standards (EPS) to service tickets

a. EPS are applied to service tickets upon completion of the job and filed in the Operations Center. Variances between the standard (EPS) and actual hours worked are reviewed and/or investigated.

b. Our review of 50 service tickets completed between April and August 1982 showed variances from .25 of an hour to 13.5 hours without a review or investigation being performed. MCO P11000.7B, par 4001.3.a(1) requires the reception clerk to enter the standard (EPS) hours on each service ticket.

c. EPS should be used in scheduling productivity enhancement, and as the basis for summary reports to management. If the EPS are not compared to the actual time required to complete a task, the effort of posting the EPS to the service ticket serves no useful purpose, ~~and should be discontinued~~.

Recommendation . CMC review MCO P11000.7B and establish a procedure to review and/or investigate variances between the ~~standard~~ (EPS) and actual hours ~~or discontinue the requirement for entering the EPS~~ on service tickets.

XIV

Identifying hours required for rework

a. Rework hours required by the Maintenance and Repair Branch of the Base Maintenance Department (BMD) are not being identified. Failure to identify rework hours distorts productivity figures and denies management the necessary data required to guage the quality of work.

b. BMD is not utilizing Work Generator Code (WGC) 14 to identify hours expended on rework within the Maintenance and Repair Branch. MCO P11000.7B, Real Property Facilities Manual, Vol III, par 4050.2b states that WGC 14 includes hours expended for rework, delay, transportation, approved tardiness, participation in charity campaigns, blood donation, etc. We asked 12 major customers of BMD if rework was ncessary because of faulty original work, and 10 or 83.3 percent indicated that rework was sometimes required.

Audit Item Number 1. Exceeding the desired range for service work.

The audit report states that Marine Corps Base exceeded the desired range for service work of ten to 15 percent established by MCO P11000.7B. Camp Lejeune and other Marine Corps activities have long maintained that the ten to 15 percent range is unrealistic and cannot be applied across the board for large and small activities. The subject has been discussed during Maintenance Management conferences for many years. Because of its size, Camp Lejeune must maintain emergency/service work centers in six outlying areas. During FY 1982 these work centers generated 187,588 productive man-hours which is 21.6 percent of the total productive man-hours for all work centers.

The audit report stated that for the first three quarters of FY 1982, 28 percent of total productive hours were for service work. We did the following analysis based on the total productive hours for FY 1982.

1. Total productive man-hours by Work Generator Code for all work centers

WGC		Productive Man-Hours	Percent of Total
01	Emergency Work	41,471	4.8
02	Service Work	233,368	26.9
03	Standing Job Orders (Unestimated)	85,949	9.9
04	Standing Job Orders (Estimated)	267,138	30.8
05	Specific Job Orders	239,815	27.6
	Total productive man-hours	867,741	

Because of its size, Marine Corps Base must maintain 6 Emergency/Service Work Centers in outlying areas. Three of these work centers perform Family Housing maintenance, all of which is done on service tickets under the Service Contract concept where previously much of the work was done on Specific Job Orders. We feel that an evaluation of Service Work should exclude the outlying work centers.

Our analysis of productive man-hours for parent shops excluding Work Center 31 (Emergency/Service) is shown below.

2. Total productive man-hours by Work Generator Code for parent work centers excluding Emergency/Service Work centers

WGC		Productive Man-Hours	Percent of Total
01	Emergency Work	20,046	2.9
02	Service Work	129,287	19.0
03	Standing Job Orders (Unestimated)	56,317	8.3
04	Standing Job Orders (Estimated)	240,996	35.4
05	Specific Job Orders	233,508	34.4
	Total productive man-hours	680,154	

The above figures omit a very significant portion of the total maintenance program at Camp Lejeune, the amount of specific work contracted out. During FY's 1980, 1981 and 1982, Base Maintenance contracted out $2.5 million, $3.8 million and $3.9 million respectively. The work contracted is determined during Control Inspection and requires significant inspection time to provide contract scope, perform final contract inspections and administer contractor warrantee procedures. The amount contracted out in FY 1982 equates to 313,846 shop hours. This is specific work which would have been accomplished by in-house forces if the ceiling points had been available. We contend that no realistic evaluation of productive hours and percentages of service work and specific work can be made without taking into consideration the large amount of specific work done by contract. On a Base the size of Camp Lejeune, the amount of service work required does not simply "go away" because of the large amount of specific work contracted out. We believe that the following figures provide a much more accurate perspective of the relative percentages of work accomplished in the total maintenance program at Camp Lejeune.

WGC		Productive Man-Hours	Percent of Total
01	Emergency Work	20,046	2.0
02	Service Work	129,287	13.0
03	Standing Job Orders (Unestimated)	56,317	5.7
04	Standing Job Orders (Estimated)	240,996	24.2
05	Specific Job Orders	233,508	23.5
	Specific Work Contracted Out	313,846	31.6
	Total productive man-hours	993,999	100

Item II: Reducing turn around time on specific jobs.

Recommendation 1. Marine Corps Base take corrective action to improve Base Maintenance Division responsiveness to specific job of maintenance and repairs to Marine Corps facilities.

Marine Corps Base Response. Nonconcur. The audit item shows a complete lack of understanding of the Marine Corps Maintenance Management Planning and Programming System as outlined in MCO P11000.7B.

The audit report states that "8 months elapsed from receipt of the work request to completion of the work". Our review shows that only 8 of the 24 jobs reviewed by the auditor resulted from work requests. The remaining 16 jobs were generated by inspection and were programmed for accomplishment during Second and Third Quarters of Fiscal Year 1982. The Annual Work Program consisting of work planned for accomplishment during the coming fiscal year is required to be finalized by the beginning of the Fourth Quarter of the previous fiscal year in accordance with MCO P11000.7. Inspection reports for the work are forwarded to Planning and Estimating during Third and Fourth Quarter of the previous fiscal year and First and Second Quarter of the current fiscal year for preparation of job orders to be included in Quarterly Works Plans. Job orders are then programmed to provide a balanced shop workload throughout all four quarters taking into account seasonal requirements. The progress of ~~these~~ the jobs reviewed by the auditor through the various phases was as planned to meet the requirements of the work program. Additionally, the programmer must allow lead time for material procurement which averages 90 to 120 days.

A review of the eight jobs resulting from work requests shows that average elapsed time was 166 days. The elapsed days would have been much less had material problems not been encountered.

The auditor states that a random sample of 50 specific jobs were reviewed and that they were able to determine the turn around time for 24 jobs was 256 days. We determined that the other 26 of the 50 jobs sampled but not evaluated by the

auditor had an average turn around time of 138 days.

If the purpose of the audit item was to determine response time to customer work requests, a representative sample of jobs generated by work requests should have been used.

Recommendation 2. Marine Corps Base establish a method of recording, measuring and evaluating turn around time for specific jobs to aid in recognizing work process inefficiencies.

Marine Corps Base Response. Nonconcur. The present system for planning and programming work is adequate for attaining our goal of providing a balanced shop workload and utilizing 75 percent of available resources for specific work. The system proposed by the recommendation would be very time consuming and would have to be absorbed by already overtaxed personnel resources. Additionally, the work process phase time in Work Reception (work classification), Planning and Estimating and Shop Planning is very reasonable given the volume of work throughput. The elapsed days from receipt of material to start of job is directly related to the Quarter in which the work was programmed as discussed in the response to Recommendation Number 1. It is very disappointing that the auditor completely ignored the most significant factor in job process time, the elapsed days from ordering to receiving material which accounted for over 50 percent of the average elapsed time. Long lead time and unpredictability of time required for material procurement is one of the most significant problems in maintenance management. Had the auditor chosen to investigate this problem some benefit might have been derived from this audit item.

Audit Item Number 3. Failure to properly schedule specific job orders.

Recommendation. None.

Marine Corps Base Response. The auditor has misinterpreted the instructions for preparing Master Schedules contained in Appendix B-9 of MCO P11000.7B. His interpretation is that 75 percent of total available productive hours are to be scheduled for Specific Job Orders. His statement that "MCO P11000.7B, paragraph 406.1 states that 25 percent will compensate for urgent jobs, Service Work and unforeseen events" is incorrect. As can be seen in Appendix B-9, page B-31 of MCO P11000.7B, the 75 percent criteria applies to the number of hours available for Specific Job Orders which is obtained by subtracting Overhead (supervision, leave and other), Standing Job Orders (03 and 04_ and Emergency and Service Work (E/S work is done on Standing Job Orders). See paragraph 4.b., Section I, Hour Summary on page B-31 of Appendix B-9. Subparagraph (5) of paragraoh 4.b. is entitled "Service Work (02)" which is a typographical error. The title should be "Available for Specific Job Orders" as can be seen by referring to the same appendix in MCO P11000.7A. The computation for determining man-hours available and scheduled for specific work for the work centers cited by the audit should have been done as follows: The example used is Shop 41 for the week of 9 May 1982.

	Man-hours	Percent of Total
a. Payroll strength 59 men	2360	
b. Total hours available 59 men X 40 hours	518	
c. Less overhead (leave and supervision)		
sub-total, productive hours available	1842	
d. Less Standing Job Orders (03 and 04)	719	39.0%
Sub-total	1123	
e. Less emergency and service work	323	17.5%
f. Total available for Specific Jobs	800	43.5%
g. Scheduled for Specific Jobs	740	92.5%

The following indicates the percentages of available hours for Specific Jobs scheduled for the shops in the weeks reviewed by the auditors computed as shown in the example above. The indication is that Marine Corps Base overscheduled, i.e., scheduled in excess of 75 percent of the hours available for Specific Jobs. Also, shown is the percentage of productive hours used for emergency/service work.

1. Percent of Man-hours available for specific work scheduled.

Work Center	WEEK ENDING			
	4/9/82	4/16/82	4/23/82	4/30/82
41	92.5	95.2	90.6	92.3
43	78.3	72.8	68.0	87.0
51	88.5	81.7	85.0	79.5

2. Percent of total productive hours utilized for emergency/service work.

Work Center	WEEK ENDING			
	4/9/82	4/16/82	4/23/82	4/30/82
41	17.5	15.9	16.6	17.9
43	7.0	15.4	9.0	12.3
44	12.7	13.9	10.9	12.4

AUDIT ITEM IV. Insufficient use of Specific Job orders

EFFECT OF M-1 CONTRACTS ON WORK CATEGORY PERCENTAGES

WORK CATEGORY	MAN HOURS	PERCENTAGE	
EMERGENCY	35,401	4.06	
SERVICE	176,275	20.22	
STANDING Job Orders	244,536	28.05	
Specific Job orders	173,222	19.87	47.67
Specific Work contracted	242,445	27.80	
	871,879		

ABOVE Figures are for the 9 months used by the auditors. Our answer to audit item 1 provides figures for all of FY82. I believe item 1 is sufficient to answer this item also — possibly with some rewrite.

Item V. Marine Corps Base is not generating sufficient work from Continuous Inspection.

No Recommendation Given:

Marine Corps Base Response: The auditors stated that "The Base Maintenance Department (BMD) is accomplishing much of their ~~XXX~~ work on an intermittent breakdown basis rather than on the basis of the continuous inspection program. We determined that only 11.5 percent of the in-house maintenance effort is being generated from the continuous inspection program." These statements are highly inaccurate and misleading.

MCO P11000.7 provides no criteria for evaluation of shop man-hours generated by inspection as a percentage of the total productive hours available, hence the 11.5 percent figure is meaningless. The methodology used by the auditor makes no allowance for the fact that man-hours available for specific work is determined by subtracting out man-hours which must be utilized for emergency and service work and standing job orders. The auditors did not allow for specific work generated by Maintenance and Repair and Utilities Branch personnel who provide information to the inspectors from preventive maintenance inspections. Had this been included the hours of specific work generated from inspection would have been 14,459 man-hours instead of 7,452 man-hours allowed by the auditor. Additionally, no allowance is made for the large amount of specific maintenance work which is contracted out. One hundred percent of the contract maintenance work is generated by the Continuous Inspection Program. The following is our evaluation of the specific work generated by the Continuous Inspection Program. The figures are based on the total for FY 1982.

	Man-Hours	% Generated By Inspection	Hours Generated By Inspection
Specific work - In-House	239,815 ~~230,963~~	*41.8%	100,293 ~~96,543~~
Specific work - Contract	313,846 ~~323,260~~	100%	313,846 ~~323,260~~
Total hours available for specific work	553,861 ~~554,223~~		414,089 ~~419,803~~

*Using the percentage determined by the auditor which is low.

Hours from Inspection $\frac{414,089}{553,861}$ 74.8%

Total hours available

~~419,803~~ / ~~554,223~~ = ~~76%~~ generated from Continuous Inspection

This percentage correlates with the criteria of MCO P11000.7, paragraph 3022.1 which states that programmed work should approximate 70 to 80 percent of available resources. The Base Maintenance Annual Work Program includes work planned for both shop forces and contract. This total maintenance program must be considered given the fact that in-house forces have been reduced from over 1100 personnel to slightly over 800 while maintenance funds available have been increased dramatically for accomplishment of work by contract.

٤٢٢,٥٠١	٤١٥,٤٢٤	
٥٣٩,٤١٤	٥٢٩,٤١٤	
٩٥٥,٨١٩	١٤٨,٤٤٤	

٢٠٤,٣٤ ٩٥٥,٨١٩

١٤٨,٤٤٤

Audit Item VI : Inadequate ~~Materials~~ Estimates of material for projects has led to the generation of excess material.

This item was answered previously. May want to update reply.

Item VII. Assigning Priorities to Maintenance Jobs.

Recommendation. Marine Corps Base properly utilize the one priority designation "expedite" as required by the criteria described in NAVFAC MO-321, paragraph 6.4.3.

Marine Corps Base Response. Concur. Marine Corps Base utilizes the MO-321 priority designation system as will be shown below.

a. We believe that the auditors interpretation of MO-321, paragraph 6.4.3. is incorrect regarding their statement that "Job orders designated as "expedite" for convenience, comfort and/or appearance are unacceptable". We contend that work performed for "comfort" involving restoring air conditioning, heating and other essential utility systems contributing to the health, welfare and morale of the troops are mission related. Also, work accomplished to optimize the appearance of specific areas of the base in preparation for short notice VIP visits or other command functions are likewise related to mission in the eyes of the command. Command interest work to modify buildings for relocation of tenant units or work involving troop training are surely mission related. Our review did not indicate any work expedited merely for convenience. A factor in assigning an expedite or urgent priority to a job in many instances relates to expediting procurement of materials rather than urgency of scheduling the work. Material lead times of 90 to 120 days are not uncommon. The Supervisory Shop Planner is advised verbally of jobs in this category so that materials can be ordered on a priority basis and scheduled routinely rather than on an urgent basis. In the future such jobs will be assigned a material procurement priority rather than an urgent or expedite.

Listed below are five job orders cited by the auditor as examples of improper assignment of priorities indicating Base Maintenance justification for the priority assignment.

Job Order Number	Job Description	Justification
3808	Repairs to Parade field.	Work specifically requested by the Commanding General. Needed to repair damage from movement of military equipment on the field for static displays.
1813	Repair playground (ballfields)	Work requested by Dependent Schools which is a reimbursable customer, i.e. work can only be done when they provide funds. Authorized as related to morale and welfare of military dependents.
3617	Refinish gym floor	A minor job order (26 man-hours) designated expedite for priority material procurement. Problems experienced with gym floor finishes made it desirable to find an adequate product and avoid backlog of gym floors requiring work or costly rework of floors finished with poor materials.

Job Order Number		
3759	Repair road and gravel	Work needed to prevent delay of contractor hauling rubble to disposal site.
1347	Install window air conditioner	This job was not assigned an expedite priority.

We reviewed each of the 47 job orders cited by the auditor as expedite. Three of the 47 jobs were not assigned an expedite priority. These were job order numbers 1347, 3646 and 4222. Of the 44 jobs assigned priority, 18 were specific jobs and 26 were minor work orders. A breakdown of the 44 jobs indicating the general reason for assigning priority is as follows:

Reason for Priority	Number of Jobs	Percent of Total
Command interest	10	23 percent
Repair essential utilities	12	27 percent
Unanticipated or seasonal requirements	10	23 percent
safety related	7	16 percent
other*	5	11 percent
	44	

*Includes expediting materials for troop training, repair for damage by fire or vehicles.

The Maintenance Management System as prescribed by MCO P11000.7B and NAVFAC MO-321 recognizes and allows for the fact that one hundred percent accurate planning, programming and scheduling is impossible. MCO P11000.7B, paragraph 3022.1 states that "programmed work should approximate 70 to 80 percent of the available resources, the remainder being a reserve for unprogrammed work; i.e., emergency work and unknown specific jobs.", Paragraph 4061.1 allows a flexibility factor of 25 percent of

hours for unpredictable variables. NAVFAC MO-321, paragraph 9.1.1.(2) prescribes "master scheduling of 75 percent of the shop forces available for specific job order and minor work authorizations." "The remaining 25 percent --- is the cushion which provides the flexibility necessary to absorb urgent jobs or other unforeseen events." "The 75 - 25 percent ratio is not rigid. When several "crash" jobs simultaneously interrupt Master Scheduled work, it may be necessary to reduce the 75-25 percent ratio to 70-30 percent or 65-35 percent." The auditors state that 47 job orders were designated expedite out of 204 or 23 percent of the jobs scheduled. The number of jobs assigned priority is not relevent. As shown above the desired goal for scheduling specific work is 75 percent of available resources in man-hours allowing 25 percent for urgent or unforeseen requirements.

The following shows the man-hours available for specific and minor work orders and the man-hours scheduled for priority jobs during the four weeks in May 1982 reviewed by the auditors:

	Week Ending 5/7/82		Week Ending 5/14/82		Week Ending 5/21/82		Week Ending 5/28/82	
	Man-Hours	% Of Hrs Avail	Man-Hours	% Of Hrs Avail	Man-Hours	% Of Hrs Avail	Man-Hours	% Of Hrs Avail
Available for scheduling	5087	100%	5059	100%	4482	100%	4874	100%
Scheduled specifics	4021	79%	4023	79%	3893	86%	3989	82%
Scheduled minor work	1066	21%	1036	21%	589	14%	885	18%
Scheduled expedites	1024	20%	724	14%	353	8%	429	9%

As can be seen, the 75 percent goal for scheduled specifics was more than met in each week while the percent of man-hours utilized for priority work was well below the allowable 25 percent of available man-hours.

Audit Item Number 11. Review of completed specific job order estimate and performance variances.

Investigation of job order variances for the months of July and August, 1982 has been completed. The Variance Reports were reviewed by the Assistant Maintenance Officer and the Directors of the Maintenance and Repair and Operations Branches and corrective action was initiated as appropriate. Variances for the month of September 1982 are now being conducted. The completed Specific Job Order Report from which September variances are determined was not received until the last week in October.

Audit Item Number 12. Establishing a procedure for registering customer complaints.

Recommendation. Marine Corps Base establish a central contact point to register/record customer complaints.

Marine Corps Base Response. Nonconcur. Employees in the Work Reception Section are trained to give prompt and courteous assistance to customers who call in complaints. If unable to satisfy the customer, Work Reception personnel refer callers to the Operations' Branch Director or in some instances to the Base Maintenance Officer. Customer complaints are received at all levels of the Base Maintenance Division from the Maintenance Officer on down. Establishment of a central control point for taking and recording all complaints is not believed to be necessary or desirable. The system would prevent the caller from reaching the level in the organization he feels should hear his complaint. Additionally, establishing such a position to receive and record complaints would add additional paperwork and constitute an added drain on limited personnel resources in Base Maintenance.

Audit Item Number 13. Applying Engineered Performance Standards (EPS) to service tickets.

Recommendation. CMC review MCO P11000.7B and establish a procedure to review and/or investigate variances between the EPS and actual hours on service tickets.

Marine Corps Base Response. Concur in part. Review and/or investigation of variances between EPS and actual hours on individual tickets would serve no useful purpose. EPS task hours allotted are based on averages. For example, the EPS allowance for untop commode is .6 hours. In practice the work could

involve a few minutes with a "plumber helper" to eight or 12 hours to rod out the sewage lateral. The comparison of EPS and actual hours will only be valuable when data process support is available to record and summarize EPS versus actual man-hours by job description, by work center and by individual workman for all service tickets written. Marine Corps Base is in the process of acquiring data process equipment and programming support to do this.

Assigning Priorities to Maintenance Jobs

1. Reviewed 204 JOBS

2. EXPEDITE PRIORITY WAS ASSIGNED TO
   a. 18 specific Jobs over 80 man hours
   b. 36 Minor specific Jobs under 80 man hours
   54 Total Jobs expedited

5087

5059

448

	5-7-82	5-14-82	5-21	5-28
04-	3406	3267	3661	3375
MAJ. HRS	4021	4023	3893	3989
EXP HRS	920	473	260	365
	23%	12%	7%	9%
04	1522	1476	1619	1385
MIN HRS	1066	1036	589	885
EXP HRS	104	251	93	64
	10%	24%	16%	7%
01+02	4908	4854	4829	5348
SCHED 04+05	10015	9802	9762	9634
TOTAL HRS	20,765	21269	21653	22213
NON PROD	5818	5802	5997	6077
PROD	14947	15467	15656	16136
	24	811	1065	1154

NO	DATE		REASON
9315	4-19-82	-- INSTALL WIRING	MUST COMPLETE BY 23APR
4055	5-5-81	-- PREPARE BALLFIELDS	LATE REQUEST
3741	4-15-82	-- LOWER CULVERT	REQUEST BY ROICC
0900	2-12-82	-- BLDG 225 RENOVATE INT	" BY FAC
3614	3-11-82	-- DA 144 FIRE DAMAGE	" BY MR ELSTON
3740	4-15-82	-- RPR BALCONY HANDRAILS	SAFETY
3737	4-19-82	-- RPR 12" WATER VALVE	"AT WORK"
3282	12-16-81	-- RPL HOT WATER HEATING COIL	HEATING PLANT
2077	3-11-81	-- WEIGHTS IMPROVE PRESENT TESTING	
3301	12-22-81	-- RPL HOT GAS BYPASS ON A/C SYSTEM	FOR DEHUMIDIFICATION OF PARACHUTES
~~2675~~ 3111	9-25-80	-- 2615 ALTER PIPING AROUND BOILER	PER MR. ELSTON
3374	1-20-80	-- AS 202 RPL HOT WATER HEATING COIL	MR FISHER
3735	4-21-82	-- RPR BURSTED 8" WATER MAIN	"AT WORK"
3655	3-23-82	AS 302 RPR AIR COMPRESSOR	DENTAL CLINIC WORK STOPPAGE
0008	4-5-82	FERTILIZE FOOD PLOTS	LATE REQUEST
3779	4-30-82	REPAIR CURB GUTTERS	"AT WORK"
3808	4-30-82	REPAIR PARADE FIELD	"SAFE MARCHING
3180	11-12-81	GP-2C RPR HEAD FAC	NO HEAD FAC
3724	4-12-82	CLEAN UP LIMBS, PINE CONES	WINDSTORM
3752	4-23-82	MOVE HYDRANT	"AT WORK
2108	4-27-82	915 INSTALL 125 V 30 AMP CIRCUIT	
3754	4-27-82	RPR BURST 6" WATERMAIN	"AT WORK"
3591	3-10-82	RPL EXPANSION JOINT	WALTER WHITE
3617	3-15-82	REFINISH FLOOR	TRY NEW PRODUCT
1813	2-23-82	S-1950 (DEPT SCHOOLS) PREPARE FIELDS	LATE REQUEST
4206	6-11-81	PAINT BLEACHERS	BY JUNE 24
3793	4-27-82	RPR REFRACTORY	BOILER IS SHUT DOWN
2118	5-6-82	CLEAN SLUDGE BEDS	"AT WORK"
3801	4-28-82	INSTALL 1" CONDUIT	
3426	1-29-82	2615 RPL HOT WATER HEAT COIL	J. SPENCER
3624	3-19-82	SG & RR II RPL CONDENSATE PUMP	" "
3625	3-19-82	84, RR-8 RR-1" "	" "
3805	4-30-82	TC-701 " " "	TODD
6740	4-30-82	FAB V-BLIND SLATES	HSG

3796	4-27-82	303 FRAME IN DOORS	
4485	8-4-81	RELOCATE PRI & SECONDARY	IN WAY of CONTRACTOR
3792	4-27-82	RPR REFRACTORY	BOILER IS SHUT DOWN
3794	4-27-82	" "	" "
3759	4-21-82	RPR ROAD	COL MOUNT
3230	11-23-81	RPL INSTANTROL STEAM HEATER PKG	JACK YOUNG
1354	5-18-82	POWER FOR CARNIVAL	PER FAC
3525	SBB-25	SBB-25 REHAB LIGHTING SYSTEM	IRELAND
3826	5-17-82	RPL COND. RETURN LINE	WHITE
3855	5-17-82	CUT TREES (POWER FEEDER)	CAULEY
3487	2-12-82	PRP PLASTER WALLS	ACCOMPLISH WITH S.O. 1212
3821	5-4-82	RPR WALL HIT BY TRUCK	MR. DILLON
1346	5-14-82	INSTALL ELEC CIRCUIT	SAFETY NEEDED FOR COMPUTER INSTALLA
2121	5-14-82	FAB LAWN CHAIRS & TABLE	COMMAND INTEREST
3376	1-20-82	RPL DEFECTIVE HIGH VOLT FUSES	M&R
2106	1-21-82	INST ELEC CIRCUIT	HEAVY EQUIP NEEDS FOR EQUIP
3738	4-13-82	RPL GAS REFUELING PUMP	"DAMAGE REPORT"
3619	3-15-82	S-1026 RPL VALVE - FUEL TANK	MR DILLON
3736	3-6-81	RENOVATE MACHINE ROOM	REQUIRED FOR CONTRACTOR-TIE IN
3633	3-17-82	45 LEAKING WATER LINE	M&R

JOBS from Customer Work Request

JON	Prog qtr	ELAPSED DAYS	
3346	2nd	60	
4334	1st	56	
5189	1st	262	—
5113	2nd	316	—
3442	3d	101	
3717	3d	70	
3038	MINOR	258	ISSUED 21 SEPT —
3453	MINOR	264	—
		1327 ÷ 8 =	165.9

JOBS over 360 DAYS

JON		ELAPSED DAYS
3787		485
3587	MINOR	430

Jobs from Inspection

JON	QTR	DATE INITIATED		QTR PROG	ELAPSED DAYS
4332	3d	6-15-81	A	2nd	263
5117	4th	7-8-81	A	2nd	247
4452	4th	7-20-81	A	2nd	235
3040	4th	9-3-81	A	2nd	197
7572	3d	4-23-81 (H) (APPROVED 7-6-81)		3d	337
3427	1st 82	11-19-81	Fire Damage	2nd	127
6536	4th	9-17-81 (H)		2nd	207
5126	3d	6-23-81	A	3d	290
5063	4th	7-13-81	A	2nd	277
8690	2nd 82	3-25-82		3d	29 EXPEDITE
3194	1ST 82	11-4-81		3d	156
5129	4th	8-19-81		1st	254
3112	1st 82	10-6-81	MINOR		199

Jobs from Shops

		Prog QTR		
4098	5-13-81	3d	326	seasonal
3787	12-22-80	2nd	485	
3587	1-20-81	minor	430	

	J.O#		RECEIVED		COMP	DAYS LAPSED	NOTE
46	3356	*	1-18-82	VERBAL	3-5-82	46	EMERGENCY RPRS ON OVERTIME - MAT ORDERED TO COMP JOB
85	1190		6-5-81	W.R	3-26-82	294	REQUEST FORWARDED TO FAC FOR (R-1) APPROVAL - FAC APPROVED WORK ON 20 JAN 82 - JOB ORDER SENT TO SHOP 20 JAN 82
156	0002		10-27-81	NREAD HANDWRITTEN	4-1-82	156	WILDLIFE FOOD PLOTS
81	1199		11-16-81	Fred Cone VERBAL	4-16-82	152	REQUEST FORWARDED TO FAC FOR (R-1) APPROVAL - FAC APPROVED WORK ON 1-25-82
84	2026		12-11-81	VERBAL WC 31	3-5-82	84	REPAIR WALK-IN FREEZER
75	1177		12-28-81	VERBAL FAC	3-12-82	75	TROOP TRNG/SHOP SUPPORT (R-1)
43	2050		2-4-82	UTILITIES WR	3-19-82	43	CLEAN SLUDGE DRYING BEDS
105	2194		12-4-81	PM FOLLOW-UP WC 51	3-19-82	105	REPAIR MESS HALL EQUIPMENT
5	1315		11-30-81	WR	3-26-82	116	RI PROJECT -- APPROVED 21 MARCH 82
32	0406		2-8-82	WR	3-12-82	32	REIMBURSIBLE NRMC - EQUIP INSTALLATION
168	1088		6-11-81	WR	4-2-82	295	RI PROJECT -- APPROVED 16 OCT 82
37	0405		2-10-82	VERBAL	3-19-82	37	EQUIPMENT INSTALLATION - COMMISSARY
178	1027		8-6-81	WR	4-2-82	240	RI PROJECT - APPROVED 6 Oct 82
175	1038		5-13-81	WR	4-1-82	322	RI PROJECT - APPROVED 8 OCT 82
156	1143		9-28-81	WR	4-30-82	215	RI PROJECT - APPROVED 25 NOV 82

137	3310	12-14-81	M&R VERBAL WC31	137	4-30-82	REPLACE TUBE BUNDLE
16	2094	3-17-82	WR	16	4-2-82	P-1 CHART HOLDERS FOR 2ND DIV, BRIEFING ROOM
270	1285	5-2-82	UTILITIES WR	335	4-2-82	APPROVED RI PROJECT 7 JULY - MAT'L LEAD TIME
36	0311	2-25-82	NRMC WR	36	4-2-82	TICKET SENT TO SHOP. RETURNED FOR A REIMBURSABLE J.O.
192	1012	6-19-82	WR	301	4-16-82	RI PROJECT - APPROVED 6 OCT 81
259	5108	7-30-81	INSP	259	4-16-82	WORK FROM ANNUAL PROGRAM - SCHEDULED 3RD QTR
78	3470	2-4-82	UTILITIES VERBAL	78	4-23-82	SCHEDULED 3RD FY82
50	1278	2-2-82	WR	73	4-16-82	RI - PROJECT - APPROVED 2-25-82 - TROOP TRNG
42	2085	3-12-82	PLANT ACCT MEMO	42	4-23-82	BLDG. NO. SIGNS
11	0315	3-2-82	WR	59	4-30-82	RI PROJECT. APPROVED 4-19-82
45	6684	1-19-82	H&G INSP	45	3-5-82	HOUSING RENOVATION
2562 (98)				3593 (138)		

FY 8 81 — FY 82

3d QTR	4th QTR	1ST QTR	2ND QTR	3d QTR
APR MAY JUN	JULY AUG-SEPT	OCT NOV DEC	JAN FEB MAR	APR MAY JUN
		1981	1982	

	J.O.#	RECEIVED	INIATED BY		DAYS LAPSED	COMP	NOTE
263	4332	6-15-81	INSP ×	A	263	3-5-82	WORK FROM 82 ANNUAL PLAN SCHEDULED 2ND '82
60	3346	11-4-82	WR ✓		60	3-5-82	
247	5117	7-8-81	INSP ×	A	247	3-12-82	WORK FROM 82 ANNUAL PLAN
235	4452	7-20-81	INSP ×	A	235	3-12-82	WORK FROM ANNUAL PLAN '82 - SCHEDULED 2ND QTR
56	4334	1-15-81	WR ✓		56	3 12-82	JO WRITTEN 7-13-81 - SCHEDUEED FOR 1ST FY82
262	5189	6-29-81	WR ✓		262	3-19-82	SCHEDULED FOR 1ST QTR
197	3040	9-3-81	INSP ×	A	197	3-19-82	SCHEDULED FOR 2ND QTR - NO HRS AVAILABLE IN 1ST QTR
263	7572	4-23-81	Hsg INSP×		337	326-82	HOUSING APPROVED WORK TO BE ACCOMPLISHED ON 7-6-81
53	3427	11-19-81	INSP × FIRE DAMAGE		127	3-26-82	WORK SCHEDULED FOR 2ND QTR - NO HRS AVAILABLE IN 1ST QTR JOB ORDER IS HELD BY OPNS SECRETARY UNTIL INVESTIGATION IS COMPLETE - INVESTIGATOR HAD J.O RELEASED 2-1-82
207	6536	9-17-81	Hsg INSP×		207	4-2-82	
290	5126	6-23-81	INSP ×	A	290	4-9-82	WORK WRITTEN UP FROM ANNUAL PLAN '82
316	5113	5-28-81	W.R ✓		316	4-9-82	
101	3442	12-29-82	W.R ✓		101	4-9-82	NO HRS AVAILABLE UNTIL 3RD QTR
326	4098	5-13-81	VERBAL	S	326	4-4-82	MAT PROBLEM - VALVE ARRIVED IN FEB. WAITED TILL APRIL TO TURN STEAM OFF
277	5063	7-13-81	INSP ×	A	277	4-16-82	WORK WRITTEN UP ON ANNUAL PLAN '82

298	3787	12-22-80	UTIL MEMO S	485	4-21-82	FAC APPROVED 28 APR'81	
29	3690	3-25-82	INSP x	29	4-23-82	"EXPEDITE"	
70	3717	2-19-82	WR ✓	70	4-30-82		
156	3194	11-4-81	INSP x	156	4-9-82	JOB ORDER WRITTEN DURING 1ST QTR. NO AVAIL HRS IN SECOND-SCHEDULED FOR 3RD - THIS WAS ROUNTINE WORK	
254	5129	8-19-81	INSP x	254	4-30-82	SCHEDULED 1ST QTR	
258	3038	6-20-81	W.R ✓ TO AIR STATION	258	3-5-82	TICKET SENT FOR RPRS - SHOP UNABLE TO COMPLETE ON TICRET REQUEST SENT TO OPNS - PAE WROTE UP 9-18-81	
430	3587	1-20-81	VERBALS WC31	430	3-26-82	COMPLETE HEAT EXCHANGER ORDERED - SUPPLY ACCEPTED A TUBE BUNDLE ONLY - AMMENDMENT WRITTEN 9-24-81 FOR COMPLETE UNIT	
199	3112	10-6-81	INSP x	199	4-23-82	SCHEDULED FOR 3RD QTR	
204	3453	10-8-80	W.R ✓	204	4-30-82	J.O SENT TO SHOP 12-22-80 - AMENDED 2-4-82 CHANGE IN SCOPE AMENDED 2-25-82 CHANGE IN SCOPE	
5051				5386			
(210)				(224)			

BM shops work request : 3
customer work REQUEST : 8
INSpection Report : 13
24

			INIATED BY												
														HRS	
Min	3137 -	MI	INSP											56	1202
MAJ	3161 -	MI	SHOP INSP - CLEAR Power line RIGHT OF WAY											5021	69671
MAJ	3210 -	MI	INSP											670	10782
MAJ	3234 -	MI	INSP											180	2912
MAJ	3236 -	MI	W.R.											181	4857
MAJ	3253 -	MI	W.R. & Programmed FROM AP											116	2110
MAJ	3381 -	MI	SHOP INSP.											120	3677
MAJ	3471 -	MI	INSP											100	1538
MAJ	3572 -	MI	SHOP - Warrantee work											96	1380
MAJ	3616 -	MI	OPNS - WORK HAD TO ACCOM PRIOR TO CONTRACT START											385	6189
MAJ	3676 -	MI	SHOP - AT work											94	1874
MAJ	3023	MI	SHOP - INSP											241	4492
MAJ	3051	MI	INSP											539	9718
MAJ	3094	MI	W.R.											218	4463
MAJ	3109	MI	X BOQ INSP REPORT	9%		1	R I PROJECT						1671	197	4770
MAJ	3144	MI	INSP	31%		6	SHOPS						5868	254	6373
MAJ	3202	MI	W.R.	8%		10	W.R.						1577	172	2710
MAJ	3211	MI	INSP	42%		25	INSP & PROGRAM (TOTAL OPNS)	P&E					7939	424	6730
MAJ	3378	MI	W.R. & Programmed FROM AP	3%	X	3	BOQ INSP						499	349	7796
MAJ	3487	MI	X FAC	4%	X	3	COMMAND INT						768	407	8039
MAJ	3684	MI	X UTIL	3%	X	2	UTIL						639	489	7735
MAJ	3793	MI	X UTIL			50							18,961	150	2291
MAJ	3931	MI	INSP											477	6779
MAJ	3035	MI	INSP				Inspectors	7939						1038	21610
MAJ	3042	MI	INSP				SHOP INSP.	5382						248	6919
MAJ	3065	MI	INSP				UTIL INSP	639						86	7488
MAJ	3099	MI	W R				BOQ INSP	499						102	1657
MAJ	3098	MI	INSP					14,459						130	4893
MAJ	3114	MI	W R & Programmed from AP											197	3670
MAJ	3118	MI	W.R.											105	1604

					HRS	TOTAL
MAJ	3175	M1	✓	INSP	172	4468
MAJ	3184	M1	✓	WR	160	3343
MAJ	3207	M1	✓	P+L	175	2669
MAJ	3212	M1	✓	W.R + PROGRAMED	294	5165
MAJ	3215	M1	✓	W.R + PROGRAMED	179	3797
MAJ	3237	M1	✓	INSP	954	19580
MAJ	3240	M1	✓	W.R	210	3514
MAJ	3280	M1	X	BOQ INSPECTION REPORT	99	1636
MAJ	3315	M1	✓	INSP	127	2551
MAJ	**1370**	**R1**	✓	**FAC**	**1671**	**53571**
MAJ	3651	M1	X	MR ELSTON	186	4266
MAJ	3158	M1	✓	INSP	170	2600
MAJ	3052	M1	✓	INSP	479	8686
MAJ	3360	M1	X	FAC	175	3178
MAJ	3447	M1	✓	INSP	140	2092
MAJ	3690	M1	✓	W.R	108	1876
MAJ	3715	M1	X	BOQ	203	3265
MAJ	3717	M1	✓	W.R	186	3683
MAJ	3180	M1	✓	W.R	135	3030
MAJ	3826	M1	✓	SHOP - AT WORK	296	5893
					18961	364786

5113 316 DAYS REPlace Bumper Guards

1. Received 28 AUG 1981
2. MAT ordered 31 AUG 1981
3. PRI 14
4. RDD 1 JAN 1982
5. START DATE 11 JAN 1982
6. 2ND QTR PROG - (OK)
7. comp BY 2 MAY 82
8. completed ON 9 APRil 1982

5189 262 DAYS RPR LIFT HYDRAulic FC-251

1. Received 17 Sept 1981
2. MAT ordered 18 Sept 81
3. PRI - 9
4. RDD - 23 OCT 1981
5. START DATE 2 NOV 1981
6. MAT PROBlems
   1. 6 OCT 1981 UP DATE RDD 20 NOV 81
   2. 10 DEC 1981 P&C Doing Follow-UP
   3. 19 FEB 1982 SHOP STORES Doing Follow-UP
   4. 25 FEB 1982 NEW RDD 23 March 1982
   5. MATERIAL CAME IN ON 3 March 1982
7. JON WAS completed ON 19 March 1982

NOT BAD Except FOR MAT.

IN WK MANAGEMENT — 149 DAYS

NOT BAD

JON	LABOR TIME	DESCRIPTION
3038	258 DAYS	RPL FIRE EXIT IN 9 G-BLDS

(1) RECIEVED OCT 7 1981
(2) MAT ORDERED OCT 22. 1981
(3) PRI 14
(4) RDD - 12 FEB 82
(5) START DATE 22 FEB 82
(6) minor comp BY. 5 MAR 82
(7) comp 5 MAR 1982

3453 204 DAYS RPR 12 HANGER DOORS

(1) Recieved 22 Dec 80 (ORGinal)
(2) MAT ORDER —
(3) PRI 14
(4) RDD - 1 MAY 82 (120 DAYS)
(5) PROGRAMED FOR 3RD QTR -
(6) START DATE 11 MAY 82

MAT. PROBLEMS

(1) 5 MAY 1981 ITEM NO. 1 NO IN - Rubber Bumper & water
(2) 10 AUG 1981 REORDERED ITEM NO. 1 - NEW RDD 271
(3) 12 JAN 82 NEW 032 (1 FEB 82)
(4) 26 JAN 82 SATUS - WAS (BB-2015 BACKORDERED)
(5) ITEM NO1 IN ON 31 MARCH 1982 -
(6) 1ST & 2ND AMEND. change IN scope (FEB)
(7) JON COMP 31 APRIL 1982

REASON - MAT PROBLEM -

AUDIT ITEM I: EXCEEDING the desired range for service work

	9 MO	Projected for 12 MO	%			REQ'D %
01	35,401	47,201	4.06			5.0
02	176,275	235,033	20.22			15.0
03/04	244,536	326,048	28.05			
05	173,222	230,963	19.87	47.7	75.7	80.0
CONTRACT		323,260	27.80			
TOTAL	629,434	1,162,505				

ACTUAL BREAKDOWN by WGC for F/82

WGC	MAN HRS	% of TOTAL		% by GROUPINGS
01	41,471	3.5 %		3.5
02	233,368	19.6		19.6
03	85,949	7.3	29.7	
04	267,138	22.4		76.9
05	239,815	20.0	47.3	
05 CONTRACTS	323,260	27.2		
TOTAL	1,191,001			

FY 1982 - Productive Man Hours FROM Report NO. 2

WC	
31	187,587.8
41	91,413.0
43	42,995.3
44	20,625.2
45	18,246.6
51	38,176.1
52	15,831.7
53	28,459.7
61	41,539.9
62	56,173.1
63	33,832.0
71	134,544.9
72	61,555.0
75	35,863.1
76	31,393.0
78	29,504.6
	867,741.0

WGC		
01	41,471.4	4.78%
02	233,368.0	26.89%
03	85,949.4	9.90%
04	267,137.5	30.78%
05	239,814.7	27.65%
	867,741.0	

WGC	LESS WC 31	
01	20,045.9	2.9%
02	129,286.9	19.0%
03	56,316.9	8.3%
04	240,995.9	35.4%
05	233,507.6	34.4
	680,153.2	

Apply Contract hours excluding WC 31

		%	
01	20,045.9	2.0	
02	129,286.9	13.0	
03	56,316.9	5.7	
04	240,995.9	24.2	
05	233,507.6	23.[illegible]	55,5
05 CONTRACTS	313,846	32.[illegible]	
	993,999		

Total Hrs WC 31 $\frac{187,587.8}{\text{TOTAL PROD. HRS}} = 21.6\%$

FY 1981 PRODUCTIVE MAN HOURS FROM REPORT 2

WC	HRS
31	168, 355.3
41	83, 014.6
43	42, 258.5
44	17, 479.0
45	16, 589.0
51	39, 758.0
52	16, 263.2
53	28, 369.2
61	35, 255.5
62	50, 541.2
63	27, 338.8
71	121, 175.6
72	60, 713.6
75	36, 327.5
76	31, 995.8
78	20, 250.5
	795, 685.3

WGC		%
01	34, 033.8	4.3
02	253, 933.7	31.9
03	42, 057.3	5.3
04	249, 022.7	31.3
05	216, 637.8	27.2
	795, 685.3	

WGC	LESS	WC 31	
01		11, 011.8	1.8
02		134, 976.3	21.5
03		41, 982.3	6.7
04		233, 016.4	37.1
05		206, 343.2	32.9
		627, 330.0	

FY 1980 Prod. man Hrs from Report #2

WC	HRS
31	197,937.9
41	83,162.2
43	44,758.5
44	17,154.0
45	14,089.0
51	37,421.8
52	15,936.8
53	26,241.6
61	39,090.9
62	47,471.9
63	24,352.0
71	126,689.1
72	63,027.0
75	36,570.0
76	33,541.7
78	19,059.0
	826,503.4

WGC		%
01	34,608.0	4.2
02	261,015.9	31.6
03	40,841.6	4.9
04	262,085.3	31.7
05	227,952.6	27.6
	826,503.4	

WGC	LESS WC 31	
01	6,275.3	1.0
02	125,326.5	19.9
03	40,769.6	6.5
04	240,778.3	38.3
05	215,415.8	34.3
	628,565.4	

Analysis of Specific work performed by contract.

FY	CONTRACT AMOUNT	M/L RATIO	TOTAL MAT'L	M-I MAT'L Per Man Hr	CONTRACT MAN HOURS
1980	$2,489,449	30/70	$746,835	$3.74	199,689
1981	3,766,318	30/70	1,129,895	3.74	302,111
~~1982*~~	~~4,029,979~~	~~30/70~~	~~1,208,994~~	~~3.74~~	~~323,260~~
		Use ACTUAL			
1982**	3,912,616	30/70	1,173,783	3.74	313,846

* AUTHORIZED
** ACTUAL

FY	CONTRACT AMOUNT	M/L RATIO	MAT'L TOTAL	LABOR TOTAL	AVG. ACC. M-I RATE	CONTRACT MAN HOURS
1980	$2,489,449	30/70	$746,835	$1,742,614	$13.425	129,809
1981	3,766,318	30/70	1,129,895	2,636,423	13.425	196,382
1982	4,029,979	30/70	1,208,994	2,820,985	13.425	210,129

27 Sep 82

$ Amt M1 Contracts - PW

'80 - $2,489,449

81 $3,766,318

82 $4,029,979 authorized (3,912,610 Actual)

Material/Labor Ratio - M1

80 Material $2,227,011 Labor 8,292,199 Ratio 0.269

81 Material $2,820,918 Labor 8,379,515 Ratio 0.367

82 Material - $2,825,000 Labor 9,411,000 Ratio 0.300

AVG .31

Material Per Man Hour - M1

'80 - 3.11

81 - 4.42

82 - 3.69

AVG 3.74

Audit Item No. 1. Exceeding desired range for service work

INVESTIGATE:

a. Effect of Housing Contract ?

b. Effect of disestablishing WC 31 for Hadnot Point (Do we have figures for FY preceding disestablishment) ?

c. Do audit figures include WC 31 ?

d. Need analysis (breakdown) on Service work as follows: Total hours for WC-31, Total hours for parent shops, Breakdown of parent shop hours for (1) Housing (2) Hadnot Point

e. Get Contract $'s for 80, 81 & 82 and MAT'L / Labor ratio from F & A.

Gary Kasehagak CALL Bob Mawhorn

Information Needed from Auditors

AUDIT Item II Reduce turnaround time on Spec. Jobs.

Need: 1. JON's for 50 spec jobs compl. during 2-month period ending 30 April 1982

2. Which 24 of the 50 were used to determine average turn around time.

Audit Item V ; MCB not generating sufficient work from Continuous Inspection

1. List of JON's for 50 specific Job orders - 17,825 man hrs - completed during FY 82, Show effect of Contracts

Audit Item VI Assigning Priorities to maint Jobs.

1. Para d. List of 115 spec JO's awaiting scheduling

LISTS PROVIDED BY AUDITORS

Assigning priorities to Maint. Jobs

74 Major work orders

Week Ending 5-7-82	5-14-82	5-21-82	5-28-82
3237	5084	6584	3683
✗ 0315 ✗	✗ 4206 ✗	4119	3408
✗ ~~4222~~ ✗ -	4323	3778	5158
7309	3042	~~✓ 2118 AT WORK~~	✗ 3855 ✗
2155	2109	5173	~~✓ 3826~~ AT WORK
✗ 4055 ✗	1039	✗ 3759 ✗	3318
7612	3882	2114	5164
3445	✗ 0008 ✗	3645	✗ 3487 ✗
✗ 3741 ✗	~~✓ 3779 AT WORK~~	3406	1079
3202	✗ 3808 ✗	5100	✗ 3821 ✗ -
3449	7335	3555	3094
3320	✗ 3867 ✗ -	1136	3109
3161	4285	3679	13 6006
3488	✗ 3180 ✗	3680	
1044	3325	3708 15	
7218	✗ 1813 ✗		
✗ 0900 ✗	4209		
✗ 0901 ✗ -	3450 18		
3098			
3032	18 of 74 JOBS EXPEDITED		
5127			
2072			
4198			
4113			
4271			
✓ 3772 ✗ -			
✗ 3614 ✗	MAJOR JO'S	18	
3245 28	MINOR JO'S	29	
		47 TOTAL	

130 Minor Work Orders

Week ending 5-7-82

✓	3740 ×	3786	
✓	~~3737 AT WORK~~	5130	
	3289	1818	
	4333	1122	
	1097	1084	
✓	3282 ×	4105	
✓	2077 ×	0400	
	1137	3672	
	3291	1065	
	3226	✓3301 ×	
	3288	3576	
	3313	3290	
	1046	✓3111 ×	
	1099		
	1101		
	3276		
✓	3374 ×		
	1007		
	6026		
✓	~~3735 AT WORK~~		
	3201		
	3307		
✓	3655 ×		
	1043		
	6595		
	1155		
	3783		
	3784	28	

5-14-82

1329	4204
0610	1052
1086	✓3801 ×
3256	3303
3728	✓3426 ×
2006	✓~~3624 AT WORK~~ ✓
2024	✓~~3625 AT WORK~~ ✓
✓~~3752 AT WORK~~ ✓	3062
1248	3566 9
3753	
✓2108 ×	
✓~~3754 AT WORK~~ ✓	
✓3591 ×	
✓3617 ×	
✓~~3805 AT WORK~~ ✓	
1131	
✓6740 ×	
✓3796 ×	
2063	
1141	
1142	
✓4485 ×	
3251	
3565	
1111	
✓3792 ×	
1140	
✓3793 × 28	

17
12
29

MAJOR SPECIFIC

5-21-82

0402
3100
3773
✓ 3230 ×
3632
5118
✓ 1262 ×-
3666
3774
1011
3460
1123
1153
3290
✓ 3525 ×
6539
3437
6739
~~✓ 1349 ×~~
✓ 1354 ×

5-28-82

1333
1168
3335
6742
1244
1180
✓ 3738 ×
~~✓ 2106~~ NOT EXPLOITS ✓
✓ 3376 ×
~~✓ 3646 ×~~
0313
~~✓ 2121~~ NOT EXPLOITS ✓
✓ 1346 ×
3637
6546
3062
3752
3515
✓ 3633 ×
✓ 3736 ×
6021
✓ 3619 ×
3974
3036
3119
3880
3497
3576
1115
3254
2189
6582

12

32

11

Jobs awaiting Scheduling
(115 Jobs)

3402	3299	0330	3739	6748
3255	3156	1265	3745	6754
3431	3278	1268	3757	6755
3559	3493	1265	3762	6756
3076	7271	1276	3775	6757
5116	3142	1284	3789	
3047	6614	1318	3806	
3048	6616	1320	3807	
3272	1082	1323	3809	
3366	3686	1328	3822	
3551	3685	1335	3832	
1817		1336	3840	
1240		1342	3844	
1216		1348	3851	
3454		1367	3861	
2066		1821	3826	
7195		2075	3676	
3155		2078	3960	
1160		2081	3964	
3195		2105	3966	
1083		2107	3973	
1089		2117	3992	
7352		2124	4004	
3393		3483	5183	
3363		3523	6727	
1085		3605	6729	
3377		3623	6734	
3418		3636	6735	
6646		3642	6736	
3231		3664	6737	
3279		3670	6738	
1184		3675	6741	
1110		3712	6747	

NATIONAL 45-907 ETEASE 45-907 20/20 BUFF Made in U.S.A.

List of 50 Specific Job orders

PAUL J. WATSON

Reviewed for continuous inspection

S 40172

item

9/28/82

	1	2	3	4	5	6	7	
	Job order Number	Job order Number						
1	3137	3114						1
2	3161	3118						2
3	3210	3158						3
4	3234	3175						4
5	3236	3180						5
6	3253	3184						6
7	3360	3207						7
8	3381	3212						8
9	3447	3215						9
10	3471	3237						10
11	3572	3240						11
12	3616	3280						12
13	3676	3315						13
14	3690							14
15	3715							15
16	3717							16
17	3023							17
18	3051							18
19	3094							19
20	3109							20
21	3144							21
22	3202							22
23	3211							23
24	3378							24
25	3487							25
26	3651							26
27	3684							27
28	3793							28
29	3826							29
30	3931							30
31	1370							31
32	3035							32
33	3042							33
34	3052							34
35	3065							35
36	3099							36
37	3098							37

VII

Assigning priorities to maintenance jobs.

a. Base Maintenance Department (BMD) has assigned priorities to maintenance jobs that do not meet the criteria described in NAVFAC MO-321, para. 6.4.3. Our review of maintenance jobs scheduled for the month of May 1982 showed that 23 percent of the specific jobs and minor work orders were planned and scheduled using the priority designator "expedite". The improper use of priority designator "expedite" has substantially effected the orderly scheduling of work that is essential in the maintenance management program. As of 12 July 1982, there were 115 job orders in which all needed material had been received that were awaiting scheduling. These 115 job orders would require 16,107 labor hours with an estimated total cost of $299,341.

b. We reviewed 74 specific job orders and 130 minor work orders contained in four weekly master schedules prepared during May 1982. Out of the 204 scheduled job orders we determined that 47 (23 percent) had been designated as priority jobs by indicating "expedite" on the face of the job order assigning priorities to jobs. MCO P11000.7A does not contain instructions for assigning priorities to jobs. Therefore, we used the criteria outlined in NAVFAC MO-321, (Maintenance Management of Public Works and Public Utilities). NAVFAC MO-321, para 6.4.3, states that the priority designation should only be used if the work is essential to, and urgently required for carrying out the assigned mission of the activity. Our review showed that job orders were being "expedited" for reasons such as (1) short notice from requestor to perform work, (2) poor planning of seasonal work, (3) testing of new products, (4) replenishing fabricated stocks that have deminished and (5) command interest.

Some examples are:

Job Order Number	Job Description	Reason for "Expediting"
3808	Repairs to parade field	To repair holes and ruts for safe marching
1813	Repair playground	Work request submitted late
3617	Refinish gym floor	To test new type of floor finish.
3759	Repair road and gravel	Erosion control
1347	Install air conditioner window	R-1 new work

Many of the reasons for expediting job orders at MCB do not meet the criteria stated in NAVFAC MO-321, para. 6.4.3. Job orders designated as "expedite" for convenience, comfort and/or appearance are unacceptable. NAVFAC MO-321, para. 6.4.3 states that when a priority is considered appropriate, it should be recommended to the Base Maintenance Officer for his approval. It should be understood, however, that such approval will be granted only in unusual cases. We believe expediting 23 percent of the specific job orders is excessive, and could be reduced through proper planning by BMD and the commands they support.

c. Job orders designated "expedite" should be essential and urgently required work. Our review of the time lapsed between the shop date for scheduling work and completed date or date of auditor's review showed a range from three to 610 days for completion. For the 47 expedites reviewed, we found an average time of 117 days or 4 months for completion. Some examples are:

Job Order Number	Job Description	Date Received In Shop	Completed Date	Dates Lapsed
3111	Alter piping	9-25-80	5-28-82	610
1262	Construct offices	3-17-81	5-28-82	437
4055	Prepare Ballfields	5-5-81	5-28-82	388
3180	Repair head	11-12-81	5-14-82	183

A review of eight job orders requested in fiscal year 1981 showed that various factors cause delay in work such as amendments changing the scope of work or changes in the specifications and/or type of material and equipment required; material not received in timely matter; and seasonal characteristics of work.

d. The improper use the priority designator "expedite" has substantially effected the orderly scheduling of work that is essential in maintenance management. Processing larger numbers of priority job orders, causes the master scheduler to reschedule or carry over other specific job orders. The end results can be noted by the number of specific job orders awaiting scheduling. Our review showed 115 specific job orders awaiting scheduling, of which 44 of the 115 were specific job orders or projects totally 11,051 labor hours that had passed the projected starting date. Further review showed that 23 of the 44 specific job orders had passed the projected starting date assigned by two or more months.

Recommendation. MCB properly utilize the one priority designation, "expedite", as required by criteria described in NAVFAC MO-321, para. 6.4.3.

Recommendation: CMC develop a priority system for accomplishing maintenance on facilities based on urgency of required maintenance.

Reasons For Expedite

	COMMAND INTEREST	SEASONAL, UNANTICIPATED REQUIREMENTS	SAFETY	UTILITY SYSTEMS	ENVIRONMENTAL	DAMAGE	OTHER
MAJOR SPEC	7	5	2	2	✱	1	1
MINOR SPEC	3	5	5	10	0	1	2
	10	10	7	12	0	2	3

JOBS ASSIGNED PRIORITY

* MINOR

		1	2	3	4	5	6	7	8	9	10	11	12
		COMMAND INTEREST	Security / SAFETY	SEASONAL/ UNANTICIP. REQ'MTS	ENVIRON- MENTAL	REPAIR DAMAGE	UTILITY SYSTEMS HEALTH WELFARE	other	MINOR J/O	OTHER	REMARKS		
1	3624	Repl. Cond. Pump 598, RR-11					✓ *		✓				1
2	3625	" 84, RR-8, RR-10					✓ *		✓				2
3	3805	Rpl. Cond. Pump Tc-201					✓ *		✓				3
4	6740	Mfr. Vcn, blinds			✓				✓	✓ HOUSING REQUESTED			4
5	3796	Frame doors BLDG 303		Security ✓ RMD					✓	STARTED AS A MINOR J/O - Amended			5
6	4485	Relocate ELEC LINES			✓				✓	✓ ROICC	PREVENT DELAY OF CONTRACTOR		6
7	3792	Rpr Refractary BB-9					✓		✓	BOILER SHUT DOWN			7
8	3794	Rpr Refractory RR-15	NOT PICKED UP BY AUDIT						✓	" " "			8
9	3759	Rpr road			✓				05	✓ ROICC	FOR CONTRACTOR ACCESS TO DISPOSAL		9
10	3230	Rpr Stm Htr RR-3					✓		✓		MESS HALL		10
11	3525	Rpr OBSTR. LIGHTS		✓					✓		OBSTRUCTION LIGHTS ON WATER TOWER		11
12	3826	Rpl. Cond Return line							—		AUDIT - NOT EXP.		12
13	3855	Rpr Power line					✓		05		POWER LINE CROSS ARM IN DANGER OF FAILING - MAIN LINE		13
14	3487	Rpr Plaster Walls BLDG 225	✓						05		BLDG 225 MOVE		14
15	3821	Rpr Vehicle Damage				✓			✓		AUDIT - NOT EXP		15
16	1346	Install Elec Serv.	✓						✓		COMPUTER INSTOCLATION		16
17	2121	Fab. Lawn chairs	✓ *						✓		AUDIT DIDN'T CONSIDER EXPEDITE		17
18	3376	Repl. Hi Voltage fuses					✓		✓				18
19	2106	Install Elec Circuit							✓		AUDIT - NOT EXP.		19
20	3738	Rpl. Gas Pump				✓			✓		DAMAGED BY VEHICLE		20
21	3619	Rpl fuel farm valve					✓		✓		LEAKING VALVE AT FUEL FARM		21
22	3736	Renovate Machine Rm.			✓				✓	STARTED AS A MINOR J/O	COORDINATE W/CONTRACT WORK		22
23	3633	Rpr Leaking water line					✓		✓		LEAK UNDER CONCR. FLOOR		23
24	1354	INSTALL ELEC SERV	✓						✓		FOR TT CARNIVAL		24
25													25
26		3	1	3		1	6		13				26
27										TOTAL JOBS 48			27
28										minor J/O's 29			28
29									35	Specific 19			29
30													30

ADDITIONAL J/O'S CONSIDERED TO BE EXPEDITES BY AUDITOR

		1	2	3	4	5	6	7	8	9	10	11	12
		COMMAND INTEREST	Safety	SEASONAL / UNANTICIPATED Requirements	ENVIRON-MENTAL	REPAIR DAMAGE	UTILITY SYSTEMS HEALTH WELFARE	OTHER	MINOR J/O				
1	4222 Rpr RR Feeder								05	NOT AN EXPEDITE			
2	0901 OP-2 BUNKER	✓							05				
3	3867 Rpl. Screens BEQS							✓	05	TROOP TRNG			
4	3821 Rpr wall damage		✓						05	DAMAGED BY VEHICLE			
5	3772 CUT Dead Trees		✓						05	Safety Hazard. Overhanging Grass CUTTERS			
6	1262 CONSTR OFFICES BLDG 1817							✓	✓	TROOP TRNG - EXP. MAT'LS ONLY		33 HRS SHOP 5/ NOT EXP.	
7	1347 Install A/C UNIT								✓	NOT EXPEDITE			
8	3646 Rpr roof drains								✓	NOT EXPEDITE			
9	SPecific	7	2	3	2	1	2	1	1				
10	Minor J/O Work	3	5	5	0	1	10	3	26				
11	Total	10	7	8	2	2	12	5					
12						EXPEDITES		ACCORDING TO AUDITOR:					
13								19 05 MAJOR SPECIFICS					
14								28 ✓ MINOR SPECIFICS					
15								47 J/O Reviewed					
16													
17								OUR REVIEW SHOWS:					
18													
19								18 05 MAJOR SPECIFICS					
20								26 ✓ minor SPecifics					
21								44					
22													
23													
24													
25													
26													
27													
28													
29													
30													

Specifics over 80 Hours EXPEDITION

			1	2	3	4	5	6	7	8	9	10	11	12	
			COMMAND INTEREST	SEASONAL/ UNANTICIPATED Requirements	SAFETY	UTILITY SYSTEMS HEALTH WELFARE	Repair Damage	ENVIRON-MENTAL	OTHER						
1	+ 0315	INSTALL WIRING	✓								Modular offices - Comm. Secy Complex				1
2	+ 4055	Ballfields		✓											2
3	+ 3741	Lower culvert		✓				*			correct serious erosion problem				3
4	+ 0900	NEW WORK 1BLDG 225	✓								COMP. DEPT MOVE				4
5	+ 3614	Fire BA-144 Damage					✓				NEED FOR BEACH SEASON				5
6	+ 0008	Fertilize feed Plots		✓				*			WILDLIFE				6
7															7
8	+ 3808	Parade Field	✓												8
9	+ 3180	Rpr head FAC	✓								EXP. MAT'LS ONLY				9
10	+ 1813	BALLFIELDS - Schools		✓											10
11	4206	Paint Bleachers	✓								EXPEDITE WAS A YEAR EARLIER FOR CM. OF COMMAND - PAINT RAN OUT - CARRIED OVER				11
12	+ 3759	Rpr Road							✓		CONTRACTOR ACCESS TO ROCK/R disposal				12
13	3855	Rpr Power line				✓					DANGER OF FAILURE				13
14	+ 3487	Rprs Bldg 225	✓												14
15	+ 4222	APR Feeder									NOT EXPEDITED				15
16	+ 0901	OP2 BUNKER	✓												16
17	+ 3772	Remove Trees			✓						HAZARD TO GRASS CUTTING CREWS				17
18	+ 3867	Rpl Screens BEQ							✓		TROOP TRNG				18
19	+ 3821	Rpr Wall damage			✓						DAMAGE BY VEHICLE				19
20	+ 3793	Rpr Retr.				✓					BOILER SHUT DOWN				20
21			2	4	3	2	1	0	2						21
22															22
23															23
24															24
25															25
26															26
27															27
28															28
29															29
30															30

JOBS ASSIGNED PRIORITY

* AT WORK

			1	2	3	4	5	6	7	8	9	10	11	12	
			COMMAND INTEREST	SAFETY	SEASONAL/ UNANTICIPATED Requirements	ENVIRONMENTAL	Repair damage	UTILITY SYSTEMS HEALTH, WELFARE	BMO/ OTHER	MINOR I/O	OTHER				
1	0315	INSTALL WIRING	✓							05					1
2	4055	Prep. ballfields			✓					05					2
3	3741	Lower culvert			✓	✓				05					3
4	0900	Renovate 225	✓							05					4
5	3614	BA144 Fire damage					✓			05	Repair fire damage				5
6	3740	BEQ Handrails		✓						✓					6
7	~~3737~~	~~12" water valve~~								~~✓~~					7
8	3282	HEATING PLANT Hot water Htg Coil						✓		✓					8
9	2077	LOAD TESTING WEIGHTS		✓						✓					9
10	3301	A/C Repair Parachute drying		✓						✓					10
11	3111	Steam meter 2615	✓							✓					11
12	3374	HOT WATER HTG COIL AS202 (Gym)						✓		✓	ORIGINAL JOB EXPEDITED AMENDMENT ISSUED 3-12-82 NOT EXPEDITE				12
13	~~3735~~	~~WATER MAIN BREAK~~								~~✓~~					13
14	3655	RPR AIR COMP Dental Clinic						✓		✓					14
15	0008	Fertilize food plots			✓	✓				05					15
16	~~3779~~	~~Rpr Parking lot~~								~~✓~~	?				16
17	3808	Rpr Parade field	✓							05					17
18	3180	Rpr head Fac	✓							05	EXPEDITED MAT'L ONLY				18
19	~~3724~~	~~clean up storm dam~~								~~✓~~					19
20	~~3752~~	~~MOVE FIRE HYDRANT~~								~~✓~~					20
21	2108	INSTALL ELEC CIRCUIT			✓					✓	INSTALLED NEW MACHINE FOR P&P VENDOR SCHEDULE HAD TO BE MET.				21
22	~~3754~~	~~water main break~~								~~✓~~					22
23	3591	Rpr Expansion Jt.						✓		✓					23
24	3617	Refinish Gym Floor							✓	✓	✓ NEEDED EARLY EVALUATION OF MAT'L TO PREVENT BACKLOGGING SIMILAR WORK				24
25	1813	Ballfields - Schools			✓					05					25
26	4306	Paint Bleachers	✓		ISSUED 6-10-81					05					26
27	3793	Rpr. Refractories						✓		05	Bldg Cat 5 shut down				27
28	~~2118~~	~~CLEAN STUDENT BODY~~								~~✓~~	AVDIT - NOT EXPEDITED				28
29	3801	Install Conduit			✓					✓	MET NAVFACENGCOM CONTRACT INSTRUCTION SKED				29
30	3426	Repl. Hot water 2615 Coil						✓		✓	CLUB - FOOD SERVICE IMPACT				30
			2	3	2	0		5		12					

			INSP HRS
05	Specific	230,963	96,543 (41.8%)
05	CONTRACT	323,260	323,260
TOTAL	HOURS	554,223	419,803

$$\frac{419{,}803 \text{ Hrs resulting from Inspection}}{554{,}223 \text{ Hrs Avail for Spec. Work}} = 76\%$$

Programmed work 70-80%
of available resources - Para
3022 of P11000.7

EXPEDITED SPECIFIC JOBS

FOF JUNE + JULY 82

DATE	JON	DESCRIPTION	REASON FOR EXPEDITE	WHO EXPEDITED
~~6-3-82~~	~~4087~~		EXPEDITED Amendment ONLY - IN ORDER TO GET ADDITIONAL SCREENS Needed	MAJ. MARIPOTI
6-3-82	3867	REPLACE WINDOW SCREENS		FAC ✓
6-14-82	7309 8TH A.	LCH HOUSING INSTALL UNDERGROUND TANKS	HOUSING REQUEST	OPNS ✓
6-16-82	3922 1ST A	REPAIR A/C	HOT WEATHER	OPNS ✓
6-4-82	2197	SHORELINE MAINT	WILDLIFE REQUESTED	OPNS ✓
6-4-82	2198	PLANT WINTER GRAINS	WILDLIFE REQUESTED	OPNS ✓
6-4-82	2131	SENIOR GUEST HOUSE INSTALL WASHER + DRYER		COMMAND OPNS ✓
6-4-82	3938	REPAIR A/C	HOT WEATHER	OPNS ✓
7-16-82	0901	OP-2 INSTALL POWER	9 AMENDMENTS - ALL EXPEDITED	FAC ✓
6-9-82	3772 1ST A	REMOVE TREES	HAZARD MR SHEPARD	OPNS ✓
6-9-82	3924	BURST WATER MAIN	" AT WORK "	M&R OPNS ✓
6-9-82	1366	SBA-129 ONSLOW B. Bridge CONSTRUCT SAFETY GUARD	" AT WORK "	M&R OPNS ✓
6-9-82	3952	RPL MOTOR STARTER	REQUESTED BY UTILITIES	OPNS ✓
6-9-82	3958	730 SELF HELP PAINT	MARSTON PAV	COMMAND OPNS ✓
7-2-82	1369	CONSTRUCT PIT FOR GREASE DISPOSAL	MR ELSTON	OPNS ✓
8-2-82	1370 5TH A	730 INSTALL CEILING	MARSTON	FAC ✓
6-11-82	3827	REPAIR SWIMMING POOL DRAIN	REQUESTED M+R	M&R OPNS ✓
6-11-82	3644	REPAIR MILLING MACHINE	" AT WORK "	OPNS
6-16-82	2141	INSTALL CIRCUITS FOR REEFERS RR-2		OPNS
6-16-82	3968	REWORK WIRING	FIRE HAZARD	OPNS ✓
6-16-82	3976	PAINT 5 ROOMS		BLDG #1 FAC ✓
6-16-82	3977	REPLACE CABLE	SAFETY	OPNS ✓
6-18-82	3980	REPAIR A/C	HOT WEATHER	OPNS ✓
7-13-82	2144 1ST A	INSTALL A/C	~~ES~~	OPNS ✓
6-21-82	4308 1ST A	RPL DOOR	EXP. AMENDMENT ONLY FOR MAIL TO COMPL. JOB	OPNS ✓
6-23-82	3987	BLDG 1 REPAIR A/C	MR ELSTON	OPNS ✓
6-30-82	1384	TEMPORY MESSHALL		FAC ✓
8-20-82	1330 4TH	PASCO BLDG INSTALL ELEC		FAC ✓
6-23-82	3990	REPLACE DEFECTIVE SWITCH - GENERATOR	EMERGENCY GENERATOR AT BRIG	OPS DIR OPNS ✓
6-24-82	0321	REPAIR CONVEYOR	" AT WORK "	M&R OPNS ✓
6-24-82	0611	PREPARATION FOR REFORESTATION	REQUESTED BY FORESTRY	OPNS ✓
6-28-82	3981	CORRECT DRAINAGE		OPS DIR OPNS ✓
6-28-82	1386	TC 1110 MODIFY INTERIOR	PW Requested	OPS DIR FAC

DATE	JON	DESCRIPTION	REASON FOR EXPEDITE	WHO EXPEDITED
6-28-82	4010	RPR ROAD	S-4 MCAS REQUEST	OPS DIR ✓ OPNS ✓
6-28-82	4022	PRR REFRACTORY	EXP. MATERIALS Req. by UTILITIES	OPS DIR OPNS ✓
7-8-82	1389	PASCO BLDG		FAC ✓
6-2-82	6765	PP 2001 INT REPAIRS	GOQ HSG	COMMAND OPNS ✓
7-1-82	4026	BLD 506 REPAIR A/C	HOT WEATHER	OPNS ✓
7-1-82	4023	730 CUT TREES	MARSTON PAV	FAC ✓
7-1-82	4030	308 REPAIR A/C	HOT WEATHER	OPNS ✓
7-1-82	4029	REPLACE AIR COMPRESSOR	DENTAL IS SHUT DOWN	OPNS ✓
7-2-82	4033	AS 705 REPAIR A/C	HOT WEATHER	OPNS ✓
7-7-82	4063	REPAIR SLUDGE COLLECTOR	UTILITIES	OPNS ✓
7-7-82	4058	326 REPAIR AIR CONDITIONERS	HOT W.	OPNS ✓
7-7-82	0114	FC 318 INSTALL OUTLETS	"AT WORK"	OPNS
7-13-82	1392	BLDG 2 INSTALL SIGN		FAC ✓
7-13-82	4071	REPAIR CULVERT	"AT WORK"	M&R OPNS ✓
7-13-82	4076	411 REPAIR A/C	HOT W	OPNS ✓
7-16-82	1209	TP 448 CONSTRUT BATTERY SHOP		FAC ✓
7-20-82	4122	RPR 2 REEFERS		OPS DIR ✓ OPNS
7-20-82	4121	RPR AIR CONDITIONERS	HOT WEATHER	OPNS ✓
7-26-82	4110	PRP PARTS AIR COMPRESSOR	UTIL	OPNS ✓
7-21-82	4123	PAINT INTERIOR	AREA HQS BLDG MR ELSTON	OPNS ✓
7-21-82	4124	RPL WALL	FLIGHT SIMUL. BLDG.	OPS DIR OPNS ✓
7-21-82	4132	RPL WIRING	FIRE HAZZARD	OPNS ✓
7-21-82	6788	RPR CEILING	LEAK IN CEILING HSG	OPS DIR OPNS ✓
7-21-82	4125	FILL IN SHORE LINE	CG INT MR ELSTON	OPNS ✓
7-21-82	4133	515 RPR A/C	HOT WEATHER	OPNS ✓
7-23-82	1398	CONSTRUCT PARTITIONS		FAC ✓
7-23-82	4139	RPR EMERGENCY GENERATOR		OPS DIR ✓ OPNS
7-26-82	4093	RPL FIRE HYDRANT	"AT WORK"	OPNS
7-26-82	4144	510 RPR A/C	HOT WEATHER	OPNS ✓
7-26-82	4091	RPR 12" WATER MAIN	"AT WORK"	OPNS ✓
7-26-82	4142	RPR A/C	HOT WEATHER	OPNS ✓
7-28-82	4170	REMOVE PIER	ACCIDENT SPEC SER	OPNS ✓
7-27-82	6779	INT & EXT RPRS	HSG	OPNS ✓

7-28-82	4169	RPL TURBINE PUMP	"AT WORK"	OPNS ✓
7-30-82	C048	CONSTRUCT CARTS	AVANT	OPNS ✓

67 EXPEDITES 21%

320 PROCESSED

	1	2	3	4	5	6	7	8	9	10
	HOUSING	FAC.	AIR COND	NREAD	COMMAND	UTIL OR M&R EMERGENCY	BMO AIBMO	SAFETY	EXPEDITE MAT'LS TO COMPLETE JOB	DIR OPS
JUNE	1	//////	////	///	//	////	/	///	/	////
TOTAL	1	7	5	3	2	4	1	3	1	5
JULY	1	////	//////////		/	//////	//	//		////
TOTAL	1	5	9	0	1	8	2	2		4
GRAND TOTAL	2	12	14	3	3	12	3	5	1	9

T. O

3111 PP2615 Alter piping
Material ordered 9-28-80
Priority 14
RDD - Jan '81
Several items were reordered due to supplier unable to deliver. Utilities provided additional info on items being orders

Examples - Steam flow meter
- Blind flange
- Weld "L's"

Once job was in shop - Chk Sys + Utilities set up steam outage. Job started and a change of scope developed. Additional material were ~~ordered~~ obtained. Job completed May 28, 1982

Note: Job was in shop, but delayed because of cold weather

J.O.

1262 Bldg 1817 Construct Offices
Material order 3-19-81
Priority 7

Auditors may mistake on
date should read 3-17-82

J.O
4055 Prepare ballfields
No materials
Job order written 5-581
Work was scheduled - but fields were being utilized. Job was rescheduled for fall, but it determined more feasible to accomplish prior to ball season starting. This was accomplished

S.O
3180 GP-26 Repair Lead
Mat ordered 11-12-81
Priority 7

Materials received work started additional damages due to frozen pipes was discovered. Additional material was ordered on BPA with additional amendment.

Item III: Failure to Properly Schedule Specific Job Orders

Recommendation: None

MCB Response: The auditor has misinterpreted the instructions for preparing Master Schedules contained in Appendix B-9 of MCO P11000.7B. His interpretation is that 75% of Total available productive hours are to be scheduled for specific job orders. His statement that "MCO P11000.7B, Par. 4061.1 states that 25 per cent will compensate for urgent jobs, Service work and unforseen events" is incorrect. As can be seen in Appendix B-9, Page B-31 of MCO P11000.7B, the 75% criteria applies to the number of hours available for specific job orders which is obtained by subtracting Overhead (supervision, leave and other), standing job orders (03 and 04) and emergency and service work (E/S work is done on standing job orders). See para 4.b. Section I, Hour summary on page B-31 of appendix B-9. Subparagraph (5) of Para 4.b. is entitled "Service Work (02)" which is a typographical error. The title should be "Available for Specific Job Orders"

as can be seen by referring to the same appendix in MCO P11000.7A.

The computation for determining man hours available and scheduled for specific work for the work centers cited by the audit should have been done as follows: The example used is Shop 41 for the week of 9 May 1982

		MAN HOURS	Per cent of total
(a)	Payroll Strength 59 man		
(b)	TOTAL Hours Available 59 men x 40 hrs	2360	
(c)	less Overhead (leave and supervision)	518	
	Sub-total, Productive hours available	1842	
(d)	less Standing Job orders (03 and 04)	719	39.0%
	Sub-total	1123	
(e)	less emergency and service work	323	17.5%
(f)	Total Available for Specific Jobs	800	43.5%
(g)	Scheduled for Specific Jobs	740	92.5%

The following indicates the percentages of Available hours for Specific Jobs scheduled for the shops in the weeks reviewed by the auditors computed as shown in the example above. The indication is that MCB oversheduled, i.e. scheduled IN EXCESS OF 75% of the hours available for specific jobs. Also, shown is the percentage of productive hours used for emergency/service work.

1. Percent of manhours available for specific work scheduled

Work Center	WEEK ENDING 4-9-82	4-16-82	4-23-82	4-30-82
41	92.5	95.2	90.6	92.3
43	78.3	72.8	68.0	87.0
51	88.5	81.7	85.0	79.5

2. Percent of total productive hours utilized for emergency/service work

Work Center	WEEK ENDING 4-9-82	4-16-82	4-23-82	4-30-82
41	17.5	15.9	16.6	17.9
43	7.0	15.4	9.0	12.3
44	12.7	13.9	10.9	12.4

Jesse

Failure to properly schedule specific job orders

III a. The Base Maintenance Department (BMD), Camp Lejeune, N.C., is not scheduling available manhours for specific work at the prescribed 75 percent level. Our review disclosed that as few as 51 percent of the available manhours had been scheduled for specific work. In addition, we noted computations for scheduling are not in accordance with current directives. Failure to adequately schedule specific work may be due to the high volume of service work completed. Scheduling specific work at a reduced level could result in inefficient utilization of available manhours and increased difficulty in accomplishing the annual maintenance plan.

b. Our review of the master schedules for work centers 41, 43, and 51 for the four weekly periods ending 30 April 1982 indicated that BMD is not scheduling specific jobs at the prescribed 75 percent level as shown below:

	Percentage of available manhours scheduled		
	Work Center	Work Center	Work Center
Week ending	41	43	51
9 April 1982	85	54	71
16 April 1982	69	51	63
23 April 1982	70	74	77
30 April 1982	77	60	66

MCO P11000.7B, Real Property Facilities Manual, VOL III, par. 4061.1, states that 75 percent of available manhours should be scheduled for specific work. We also determined the BMD is not computing the percentage to be master-scheduled properly. First, BMD is using 70 percent verses the 75 percent as prescribed in MCO P11000.7B, par. 4061.1. Second, BMD is not subtracting anticipated leave in deriving the total manhours available for master-scheduling. MCO P11000.7B,

Appendix B-9, indicates that to determine manhours to be master-scheduled, compute total manhours and subtract leave, supervision, non-productive time and standing job orders. 01:04

c. Our review of the workload for work centers 41, 43 and 51 showed that BMD is generally exceeding the 25 percent that should be available for service work. Results are shown below:

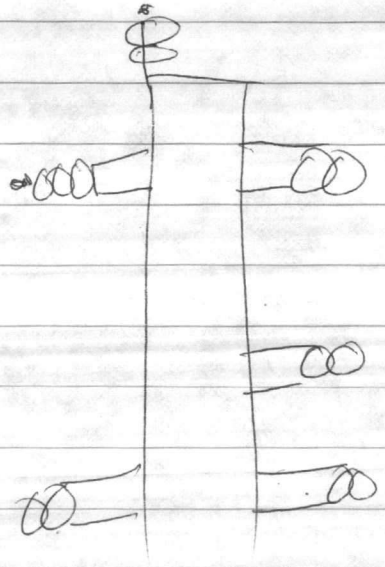
	Percentage of available manhours expended		
Week ending	Work Center 41	Work Center 43	Work Center 51
9 April 1982	26	41	32
16 April 1982	37	32	47
23 April 1982	26	35	23
30 April 1982	34	31	37

MCO P11000.7B, par. 4061.1, states that 25 percent will compensate for urgent jobs, service work, and unforseen events which would normally disrupt the scheduled specific work. We believe the large volume of service work being accomplished by the parent shops is due to the disestablishment of the emergency service center for the central area of MCB. MCO P11000.7B, par. 2022.3d, requires an emergency service center for all Marine Corps activities.

WC 51	4-9	4-16	4-23	4-30
TOTAL HRS	1040	1040	1040	1040
NON PROD	325	287	315	268
PROD	715	753	725	772
01 ↓ 07	91 12.7%	105 13.9%	79 10.9%	96 12.4%
03	0	0	0	0
04	215	184	266	158
Hsg 04	-0-	-0-	-0-	-0-
	306	289	345	254
Avail 05 HRS	409	464	380	518
OVER 80	249 (60.9)	228 (49.1)	222 (58.4)	200 (38.6)
UNDER 80	113	151	101	212
	362 (88.5)	379 (81.7)	323 (85)	412 (79.5)
	-47	-85	-57	-106

W.C 43	4-9		4-16		4-23		4-30	
TOTAL HRS	1160		1160		1160		1200	
NON PROD	193		336		298		326	
PROD	967		824		862		874	
01 + 02	75	7%	127	15.1%	78	9%	108	12.3%
03	88		52		80		78	
04	12	14%	24		20		0	
Hsg 04	40		40		40		40	
	215		243		218		226	
AVAIL OS HRS	752	77.7	581		644		648	
OVER 80	490	(65.1)	338	(58.2)	371	(57.6)	444	(68.5)
UNDER 80	99		185		167		120	
	589	(78.3)	423	(72.8)	438	(68)	564	(87)
	-163		-158		-206		-84	

WC 41	4-9		4-16		4-23		4-30
		Percent of total Prod					
01 + 02	323	17.5%	302	15.9%	315	16.6%	330
03 + 04	508		458		629		440
Hsg 04	160		160		160		160
03	51		53		35		67
	1042		973		1139		997
TOTAL HRS	2360		2360		2384		2400
NON-PROD	518		463		489		560
TOTAL PROD	1842		1897		1895		1840
—	1042		973		1139		997
	800		924		756		843
Maj	701	88%	620	(67%)	471	(62.3)	607 (72)
Minor	(39)		260		214		171
→	740 (92.5)		880 (95.2)		685 (90.6)		778 (92.3)
	60		44		71		65



1. SERVICE WORK IS NOT INCLUDED IN SPECIFIC WORK AS NOTED IN REPORT AND CONFERRED IN P11000.7B pa 4061.1 - SERVICE WORK IS CONSIDERED A STANDING JOB ORDER -

2. AFTER DEDUCTING NON PRODUCTIVE hrs ≠ STANDING 01-04, WORK CENTERS 41, 43 & 51 SHOW SCHEDULED PERCENTS FROM 68 TO 95.2% AS SHOWN below.

	4-9	4-16	4-23	4-30
41 -	92.5	95.2	90.6	92.3
43 -	78.3	72.8	68.	87.
51 -	88.5	81.7	85.	79.5

ITEM VII : Assigning priorities to Maintenance Jobs (1)

Recommendation — MCB properly utilize the one priority designation "expedite" as required by the criteria described in NAVFAC MO-321, Para 6.4.3.

MCB Response: Concur. MCB utilizes the MO-321 priority designation system as will be shown below. ~~However, the use of the word "expedite" has been discontinued and the word "urgent" as prescribed by the manual is being used.~~

1. We believe that the auditors interpretation of MO-321, para 6.4.3. is incorrect regarding their statement that "Job orders designated as "expedite for convenience, comfort and/or appearance are unacceptable". We contend that work performed for "comfort" involving restoring air conditioning, heating and other essential utility systems contributing to the health welfare and morale of the troops are mission related. Also, work accomplished to optimize the appearance of specific areas of the base in preparation for short notice VIP visits or other command functions are likewise related to mission in the eyes of the Command. * INSERT SENTENCE from back of this sheet Our review did not indicate any work expedited merely for convenience, (CONTINUED on reverse)

~~Listed below are five Job Orders~~

(CONT)

A factor in assigning an expedite or urgent priority to a job order in many instances relates to expediting procurement of materials rather than urgency of scheduling the work. Material lead times of 90 to 120 Days are not uncommon. The Supervisory Shop planner is advised verbally of Jobs in this category so that materials can be ordered on a priority basis and scheduled routinely rather than on an urgent basis. In the future such Jobs will be assigned a Material procurement Priority rather than an urgent or expedite.

* INSERT where indicated. Command interest Work to modify Buildings for relocation of tenant units or work involving troop training are surely mission related.

Item VII. Priority assignments

Listed below are five job orders cited by the auditor as examples of improper assignment of priorities indicating Base maintenance justification for the priority assignment:

Job order Number	Job Description	Justification
3808	Repairs to Parade field	work specifically requested by the CG. Needed to repair damage from movement of military equipment on the field for static displays.
1813	Repair Playground (ballfields)	Work requested by dependent schools which is a reimbursible customer ie work can only be done when they provide funds. Authorized as related to morale and welfare of Military Dependants.
3617	Refinish Gym Floor	A minor job order (26 man hours) designated expedite for priority material procurement. Problems experienced with Gym floor finishes made it desirable to find an adequate product and avoid backlog of Gym floors requiring work or costly rework of floors finished with poor materials.
3759	Repair Road and Gravel	Work needed to prevent delay of contractor hauling rubble to disposal site.

1347 [illegible]

J/O NO.	Descr.	Justification
1347	Install Window Air Conditioner	This Job was not assigned an expedite priority

We reviewed each of the 47 Job orders cited by the auditor as expedite. Three of the 47 Jobs were not assigned an expedite priority. These were Job order NOS. 1347, 3646 and 4222. Of the 44 Jobs assigned priority, 18 were specific Jobs and 26 were minor work orders. A breakdown of the 44 Jobs indicating the general reason for assigning priority is as follows:

Reason for Priority	NO. OF JOBS	% OF TOTAL
Command Interest	10	23 %
Repair Essential Utilities	12	27 %
UNANTICIPATED or SEASONAL requirements	10	23 %
Safety related	7	16 %
OTHER *	5	11 %
	44	

* INCLUDES EXPEDITING MATERIALS FOR TROOP Training, repair of damage by fire or vehicle

Item V.I.T (4)

The Maintenance Management System as prescribed by MCO P11000.7B and NAVFAC MO-321 recognizes and allows for the fact that 100% accurate planning, programming and scheduling is impossible. MCO P11000.7B para 3022.1 states that "Programmed work should approximate 70 to 80 per cent of the available resources, the remainder being a reserve for unprogrammed work; ie., emergency work and unknown specific jobs." Para 4061.1 allows a flexibility factor of 25 per cent of available hours for unpredictable variables. NAVFAC MO-321 para 9.1.1.(2) prescribes "master scheduling of 75 per cent of the shop forces available for specific job orders and minor work authorizations." "The remaining 25 per cent --- is the cushion which provides the flexibility necessary to absorb urgent jobs or other unforseen events." (CONT NEXT SHEET)

The following shows the man hours available for specific jobs and the man hours scheduled for the priority jobs scheduled during the four weeks in May 1982 reviewed by the auditors.

The auditor's statement that 47 job orders or 23 percent of the 204 job orders scheduled is not relevant. MCO P11000.7B and NAVFAC MO-321 -' '

"The 75-25 percent ratio is not rigid. When several "crash" jobs simultaneously interupt Master scheduled work, it may be necessary to reduce the 75-25 Per cent ratio to 70-30 percent or 65-35 Percent."

The auditor's state that 47 job orders were designated expedite out of 204 or 23 Per cent of the Jobs scheduled. The number of jobs assigned priority is not relevent. As shown above the desired goal for scheduling specific work is 75 percent of available resources in man hours allowing 25 Per cent for urgent or unforseen requirements.

~~Listed below are the man hours available for scheduling, the man hours scheduled and the man hours utilized for work designated as expedite on the four weekly Master schedules during~~ May 1982

The following shows the man hours available for Specific and Minor work orders and the man hours Scheduled for Priority Jobs during the four weeks in May 1982 reviewed by the auditors:

week ending 5-7-82

	Man-Hours	% of ~~TOTAL~~ Hours AVAILABLE
~~Hours~~ Available for scheduling	5087	100%
Scheduled specifics	4021	79%
Minor ~~Specifics~~ work scheduled	1066	21%
Expedites scheduled	1024	20%

week ending 5-14-82

Hours Available for scheduling	5059	100%
Scheduled specifics	4023	79%
Minor Specifics	1036	21%
Expedites	724	14%

week ending 5-21-82

Hours Available for scheduling	4482	100%
Scheduled specifics	3893	86%
Minor Specifics	589	14%
Expedites	353	8%

week ending 5-28-82

Hours Available for scheduling	4874	100%
Scheduled specifics	3989	82%
Minor specifics	885	18%
Expedites	429	9%

As can be seen, the 75 per cent goal for scheduled specifics was more than met in each week while the per cent of man hours utilized for priority work was well below the allowable 25 Per cent of available man-hours.

PLS type 2-space rough
RWD

ITEM II: Reducing turn around time on specific jobs.

Recommendation 1. MCB Take corrective action to improve BMD responsiveness to specific jobs of maintenance and repair to Marine Corps facilities

MCB Response: Nonconcur. The audit item shows a complete lack of understanding of the Marine Corps Maintenance Management Planning and Programming System as outlined in MCO P11000.7B.

The audit report states that "8 months elapsed from receipt of the work request to completion of the work". Our review shows that only 8 of the 24 jobs reviewed by the auditor resulted from work requests. The remaining 16 jobs were generated by inspection and were programmed for accomplishment during 2nd and 3d quarter of Fiscal Year 1982. The [redacted]2 Annual Work Program consisting of work planned for accomplishment during the coming Fiscal year is required to be finalized by the beginning of the fourth quarter of the previous fiscal year in accordance with MCO P11000.7. Inspection reports for the work are forwarded to Planning and Estimating during 3d and 4th quarter of the Previous FY and 1st and 2nd Quarter of the current FY for preparation of job orders to be included in quarterly work plans. Job orders are then programmed to provide a balanced shop workload throughout all four quarters taking into account seasonal requirements.

- The progress of these Jobs through the various phases was as planned to meet the requirements of the work program.

Additionally, The programmer must allow lead time for material procurement which averages 90 to 120 days.

A review of the 8 Jobs resulting from work requests shows that the average elapsed time was 166 Days. ~~The elapsed days would have been much less had material problems not been encountered.~~

The auditor states that a random ~~sample~~ of 50 specific Jobs were reviewed and that they were able to determine the turnaround time for 24 Jobs was 256 Days. We determined that the other 26 of the 50 Jobs sampled but not evaluated by the auditor had an average term errand time of 138 days. ~~Discounting the time awaiting Acts Facilities approval for the minor construction work accomplished the average turnaround time would be 98 days.~~

If the purpose of the audit item was to determine response time to customer work requests, a representative Sample of Jobs generated by work requests should have been used.

Item II - Reducing turnaround time

Recommendation 2: MCB establish a method of recording, measuring and evaluating turnaround time for specific jobs to aid in recognizing work process inefficiencies.

MCB Response: Nonconcur. The present system for planning and programming work is adequate for attaining our goal of providing a balanced shop workload and utilizing 75% of available resources for specific work. The system proposed by the recommendation would be very time consuming and would have to be absorbed by already overtaxed personnel resources. Additionally, The work process phase time in work reception (work classification), Planning and estimating and Shop Planning is very reasonable given the volume of work throughput. The elapsed days from receipt of material to start of job is directly related to the quarter in which the work was programmed as discussed in the response to recommendation no. 1. It is very disappointing that the auditor completely ignored the most significant factor in job process time, the elapsed days

from ordering to recieving material which accounted for over 50% of the average elapsed time. Long lead time and unpredictability of time required for material procurement is one of the most significant problems in maintenance management. Had the auditor chosen to investigate this problem some benefit might have been derived from this audit item.

Insufficient use of specific job orders

IV. a. MCB is not following the prescribed maintenance policy of utilizing specific job orders to the maximum extent. Maintenance and repair is being primarily accomplished under emergency/service work and during cyclic maintenance on standing job orders. This could result in inefficient utilization of personnel and result in higher maintenance costs.

b. Our review of work accomplished during the nine month period ending 30 June 1982 showed that 27.5 percent of the productive manhours were expended on specific job orders. Results are shown below:

Work Catagory	Manhours	Percentage
Emergency	35,401	5.6 (4.3)
Service	176,275	28.0 (21.3)
Standing job orders	244,536	38.9 (29.5)
Specific job orders	173,222 (199,689) (372,911)	27.5 (20.9 / 24.0) (44.97)
	629,434 (829,123)	

MCO P11000.7B, Real Property Facilities Manual, Volume III, par. 3003, states that the basic work unit is the specific job order which is identified by a continuous inspection program. The purpose of specific job orders through the an inspection program is to detect deficiencies in early stages, reduce breakdown and cost of repairs and plan for efficient utilization of labor. Any work other than the specific job order must be minimized and performed only when fully justified on a cost-effectiveness basis, because it is essential to the mission of the share activity, or because it is an emergency. This category includes: (1) emergency work, (2) service work, (3) work request, (4) preventive maintenance, (5) cyclic maintenance,

(6) other standing job order work and (7) minor construction. Maximum use should be made of specific type work in order to best utilize personnel and keep maintenance cost to a minimum.

pls type 2 space

Audit Item # 1. EXCEEDING THE DESIRED Range for Service Work

The audit report states that MCB exceeded the desired range for service work of 10 to 15 per cent established by MCO P11000.7B. Camp Lejeune and other Marine Corps Activities have long maintained that the 10 to 15 per cent range is unrealistic and can not be applied across the board for large and small activities. The subject has been discussed during maintenance management conferences for many years. Because of its size Camp Lejeune must maintain emergency / service work centers in six outlying areas. During FY 1982 these work centers generated 187,588 productive man hours which is 21.6 % of the total productive man hours for all work centers.

The audit report stated that for the first three quarters of FY 1982 28 per cent of total productive hours were for service work. We did the following analysis based on the Total productive hours for FY 1982.

1. Total productive man hours by work generator code for all work centers

WGC		Productive man hours	Per cent of total
01	Emergency Work	41,471	4.8
02	Service Work	233,368	26.9
03	Standing Job Orders (UNEST.)	85,949	9.9
04	Standing Job Orders (EST.)	267,138	30.8
05	Specific Job Orders	239,815	27.6
Total Productive Man Hours		867,741	

Because of its size MCB must maintain six emergency/service work centers in outlying areas. Three of these work centers perform family housing maintenance all of which is done on service tickets under the Service Contract concept where previously much of the work was done on specific Job orders. We feel that an evaluation of service work should exclude the outlying work centers. Our analysis of productive man hours for parent shops excluding work center 31 (emergency/service) is shown below.

2. Total Productive man hours by work generator code for Parent work centers excluding emergency / service work centers

WGC		Productive man hours	Percent of total
01	Emergency work	20,046	2.9
02	Service work	129,287	19.0
03	Standing Job orders (UNEST)	56,317	8.3
04	Standing Job Orders (EST.)	240,996	35.4
05	Specific Job Orders	233,508	34.4
	TOTAL PRODUCTIVE MAN HOURS	680,154	

The above figures omit a very significant portion of the total maintenance program at Camp Lejeune, the amount of Specific work contracted out. During FY's 1980, 1981 and 1982 Base maintenance contracted out $2.5 million, $3.8 million and $3.9 million respectively. The ~~scope~~ of work contracted is determined during control inspection and requires significant inspection time to provide contract scope, perform final contract inspections and administer contractor warrantee procedures. The amount contracted out in FY 1982 equates to 313,846 ~~equivalent~~ shop hours. This is specific work

which would have been accomplished by in-house forces if the ceiling points had been available. We contend that no realistic evaluation of productive hours and percentages of service work and specific work can be made without taking into consideration the large amount of specific work done by contract. On a Base the size of Camp Lejeune the amount of service work required does not simply "Go away" because of the large amount of specific work contracted out. We believe that the following figures provide a much more accurate perspective of the relative percentages of work accomplished in the total maintenance program at Camp Lejeune

WOC		Productive man hours	Per Cent of total
01	Emergency Work	20,046	2.0
02	Service Work	129,287	13.0
03	Standing Job Orders (Unest)	56,317	5.7
04	Standing Job Orders (Est.)	240,996	24.2
05	Specific Job Orders	233,508	23.5
Specific Work Contracted Out		313,846	31.6
TOTAL PRODUCTIVE MAN HOURS		993,999	

(2 SPACE ROUGH)

ITEM V: MCB IS NOT GENERATING SUFFICIENT WORK FROM CONTINUOUS INSPECTION

No Recommendation Given:

MCB RESPONSE: The auditors STATED THAT "Insert 1st two sentences of audit report - see attached - in Quotes"

These statements are highly inaccurate and misleading.

MCO P11000.7 Provides no criteria for evaluation of shop manhours generated by inspection as a percentage of the total productive hours available, hence the 11.5 % figure is meaningless. The methodology used by the auditor makes no allowance for the fact that man hours available for specific work is determined by subtracting out man hours which must be utilized for emergency and Service work and standing job orders, *INSERT from(over) Additionally, no allowance is made for the large amount of specific maintenance work which is contracted out. 100 % of the contract maintenance work is generated by the continuous inspection program. The following is our evaluation of the specific work generated by the continuous

The auditors did not allow for specific work generated by Maintenance and Repair and Utilities Branch personnel who provide information to the inspectors from preventive maintenance inspections. Had this been included the hours of specific work generated from inspection would have been 14,459 man hours instead of 7,452 manhours allowed by the auditor.

Inspection program: The figures are based on the total for FY 1982

	Man Hours	% generated by inspection	Hours Generated by INSP
Specific work - In-house	239,815	*41.8 %	100,243
Specific work - Contract	313,846	100 %	313,846
Total hours Avail. for spec. work	553,661		414,089

*USING the percentage determined by the auditor which is low.

Hrs from Inspection 414,089 / TOTAL Hrs Avail. 553,661 = 74.8% generated from Cont. INSPECTION

This percentage correlates with the criteria of MCO P11000.7 para 3022.1 which states that programmed work should approximate 70 to 80 Percent of available resources. The Base maintenance Annual work program includes work planned for both shop forces and Contract. This total maintenance program must be considered given the fact that in-house forces have been reduced from over 1100 personnel to slightly over 800 while maintenance funds available have been increased dramatically for accomplishment of work by Contract.

MCB is not generating sufficient work from continuous inspecitons

V a. The Base Maintenance Department (BMD) is accomplishing much of their work on an intermittent breakdown basis rather than on the basis of the continuous inspection program. We determined that only 11.5 percent of the in-house maintenance effort is being generated from the continuous inspection program. The continuous inspection program is the principle method to generate work under the controlled maintenance program and should provide a constant flow of work and efficient utilization of maintenance resources.

b. We reviewed 50 specific job orders, consisting of 17,825 estimated manhours, which were started and completed during FY 1982. We compared these jobs and manhours with work requirements shown on the continuous inspection program. Our analysis of these 50 job orders showed that 26 jobs consisting of 7,452 manhours (41.8 percent) had originated from the continuous inspection program. During the first nine months of FY 1982 MCB expended 173,222 manhours on specific job orders. If the result of our sample of 50 specific job orders is representative, then BMD expended during the first nine month of FY 1982 about 72,407, of the total 629,434 available, manhours on specific work that had originated through the continuous inspection program. This equates to 11.5 percent of the total productive manhours being expended for specific work that originated through the continuous inspection program. MCO P11000.7B, Real Property Facilities Manual, Volume III, par 3020.2c, states that the purpose of an inspection program is to detect deficiencies in the early stages of development, reduce the number of breakdowns and cost of repairs, maintain a more constant flow of work, and plan for efficient utilization of labor. The full benefits of the controlled maintenance

management program are realized when the maximum amount of work results from the continuous inspection program. Work generated primarily from sources other than the continuous inspection program results in much of the maintenance being accomplished on an intermittent, break-down basis and negates much of the time and effort expended on continuous inspections.

Reducing turn around time on specific jobs

11 a. The BMD, MCB, Camp Lejeune needs to establish procedures to record work flow for each phase of the work process for specific jobs to ensure that work flows smoothly and efficiently. These records should be reviewed to determine if turn around time is minimized from the receipt of the work request to the completion of the job. Our review of turn around time showed that about 8 months elasped from receipt of the work request to completion of work. The average time required to complete the actual work was 10 days. Although there are no firm goal for each phase of the work process, it appears the turn around time is excessive.

b. From a random selection of 50 specific jobs (work generated Code 05) that were completed during a two month period ending 30 April 1982, we were able to determine the turn around time for 24 maintenance and repair jobs. The turn around time on these jobs ranged from 29 days to 569 days and average 256 days. More than 65 percent of the jobs took more than 6 months to complete:

Elapsed Time (days)	Number of Jobs	Percent of Total	Average Elapsed Time (days)
1-30	1	4%	29
31-180	6	25%	114
181-360	13	54%	272
Over 360	4	17%	475
Totals	24	100%	256

c. A review of time elapsed between each phase of the work process for the 24 specific jobs showed certain factors attributed to the long turn around time:

Each Phase of the Work Process	1/Number of Jobs	Range of Days in Work Process	Average Elapsed Time (Days)	
Date of work request - to date work submitted to P&E	22	0-73	14	5.0
Date work submitted to P&E to-date P&E completed estimate	22	0-168	21	7.5
Date P&E complted estimate - to-date material ordered	17	9-54	24	8.6
Date material ordered - to-date material received	19	26-365	148	52.8
Date material rec'd - to-date job started	18	1-238	63	22.5
Date job started - to completion of jobs	22	1-67	10	3.6
			280	

1/ Number of jobs of which complete information and dates were available.

Further review showed that certain elements between each phase of the work process effected time elapsed:

(1) Time elapsed to perform inspection on customer work request which was not on the annual inspection plan.

(2) Backlog of work in certain craft areas of planning and estimating section.

(3) Allowing addition days to be assigned to the material required delivery date (RDD).

(4) Requirements for material having a long lead time.

Currently, there are no locally developed guidelines to record and evaluate turn around time for specific jobs or each phase of the work process to ensure that processing inefficiencies are recognized.

Recommendation . MCB take corrective action to improve BMD responsiveness to specific jobs of maintenance and repair work to Marine Corps facilities.

Recommendation . MCB establish a method of recording, measuring and evaluating turn around time for specific jobs to aid in recognizing work process inefficiencies.

TOTAL	MAT	LABOR
2,489,449	746,835	1,742,614

$746,835 MATL ÷ $3.74/man hr. = 199,689 m/hrs

Avg Accel, in-house labor rate: $13.425

$1,742,614 ÷ 13.425 = 129,804

01	47,201	4.50
02	235,033	22,40
03/04	326,048	
05	230,963	73,10
COVER	210,129	
	1,049,374	

Exceeding the desired range for service work

I a. The desired range of 10 to 15 percent of the total labor hours for service work was exceeded by ~~67~~ 87 to ~~196~~ 113 percent during the period from 1 October 1979 thorugh 30 June 1982. This signifies a large portion of the maintenance effort is directed towards work that is relatively minor in scope. These variances were reported monthly in the Facilities Mainitenance Management Report No. 6, but no comments or recommendations for improvements have been received from Headquarters, Marine Corps.

b. Our review of service work performed by all work centers, including housing, for FY's 1980, 1981 and the first three quarters of 1982 as a percentage of the total labor hours expended were:

Time Period	Total Hours Service Work	Percentage ~~of~~ to productive Total Labor Hours
FY 1980	261,048	~~24.6~~ 31.6
FY 1981	253,934	~~29.6~~ 31.9
YTD June 1982	176,275	~~25.44~~ 28

This large amount of service work could be reduced through controlled maintenance inspections and more work translated into specific jobs and scheduled for performance during the year.

1 c. Report No. 6 is prepared monthly as required by MCO P1100.7B, appendix C-7 and forwarded to Headquarters, Marine Corps for review. Comments or recommendations concerning excessive service work as a percentage of the total labor effort has not been received at MCB, Camp Lejeune. If the present ~~25~~ 28 to ~~30~~ 32 percent of total productive labor for service work is acceptable, a change to MCO P11000.7B should be made, or if unacceptable, recommendations should be made for improvements.

Recommendation . CMC review the Facilities Maintenance Management Report No. 6 and comment or make recommendations for improvement.

Recommendation ___. MCB reduce service work to a level that is acceptable in accordance with MCO P11000.7B, Appendix C-7.

MR SEIERS

WEEK ENDING: 5-28-82 C - INDICATES COORDINATING SHOP * - INDICATES TO COMPLETE JOB ** - SHOP COMPLETED

TOTAL PERSONNEL	SUPERVISION	FIXED	E/S BRANCH							LEAVE				OTHER			TICKET					04 STANDING		AVAILABLE REMARKS
JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78		M	T	W	T	F	TOT	
1.	Cut		0	19575																S							
All	Grass		4	7995												1000				A							
2.	RM	MCB	0	10964																S							
F065	Lawns	AS	4	5681												40	40			A							
3.	RM storm	MCB	0	6840																S							
F075	Drains	AS	4	4629												40	16			A							
4.	RM P/S systems		0	2865									200	200						S							
G718 G788	BKs, Admin, Etc.	HP	4	1744									104	116						A							
5.	Weed	MCB	0	2274																S							
All	Control	AS	4	234														120		A							
6.	RM		0	4885																S							
All	Steam Dist.		4	2621										380						A							
*7.	RM	M	0	46																S							
G468 G478	Masonry	Pt	4					46												A							
8.	M&R to unpaved	MCB	0	5480																S							
F115	Rds.&Sts.	AS	4	3295												40	24			A							
9.	RM Carp &	Din	0	870																S							
G748	Metal	Fac	4	532		**	**								AR					A							
10.	PM		0	1035																S							
L288	Generators		4	594						32 40							40			A							
11.	Spray	MCB	0	1500																S							
L045	Herbicides	AS	4	680														120		A							
12.	RM	Din	0	626																S							
L348	Equipt.	Fac	4	346	6									40						A							
13.	RM	Din	0	1152																S							
G708	P/S	Fac	4	583									40	40						A							

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
14.	Replace	H	0	440								AR														
G158	filters	BKs	4	140								80														
15.	PM		0	1660																						
G148	A/Cs		4	780								80														
*16.	RM	Din	0	288																						
G628	Plaster	Fac	4	163					125																	
*17.	RM Carp &		0	36				C																		
G398	Masonry	1041	4			16		20																		
18.	RM	RR	0	192																						
G578	Plaster	BB	4						70																	
19.	RM		0	1198																						
G838	Carp	FC	4			520																				
20.	Replace	M 412	0	165																						
5100	Fixtures	413	5							AR																
21.	Int. repair	M	0	435			Wooten																			
3406	& Paint	609	5	135			120																			
*22.	Repair	RR	0	150				Monk																		
3793	Refractory	15	5	126		**		24 C																		
23.	Dewinterize		0	864																						
All	A/Cs		5	640								80														
24.	Repair		0	489			Monk																			
3683	Refractory	1700	5			80																				Need material
25.	Repair		0	1178																						
4222	Feeder	RR	5	132							AR															
26.	Fab &		0	1410										Bynum												
7335	Install doors	CH	5	557			40	AR							80											
27.	Int.	M	0	403			Wooten																			
3408	Repairs	607	5			33	120		6																	

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	FT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
28.	Install tanks		0	3139						AS				AR	AR	AR										ADDED BACK Hoping Mat. WILL BE IN ~ Need more Time
7309	& Furnaces	LCH	5	1526						80				16	80	40										
29.	Prepare		0	388												C										
4055	Ballfields	FC	5	409												**	?									
*30.	Repair	AS	0	164												Schmitz										
4119	Grounds	154	5	56												82	26									
31.	Repair storm	TT	0	212												Ward										
7612	drains	2	5	198													13									
32.	Int.		0	1190			over						Chase													
3445	Repairs	202	5	1554		**	44	**	**	**			**			**										
33.	Lower Culvert	1800	0	206												C										
3741	Remove silt	area	5	190												13	**									
34.	Repair ceiling	FC	0	94						C																
5158	& lights	300	5			18				76																
35.	Replace		0	208				Monk								C										
4323	Shower pan	316	5	203									**		5	5										
36.	Repair	S	0	149												C										
3808	Field	1727	5	80												117										
37.	Provide access	MCB	0	300														Guthrie								
3855	Road	Power line	5													24	40	16	80							
38.	Int. Ext	BB	0	1419									Spencer													
3320	Repairs	12	5	1431		**	**			20			8	AR	80	40										
39.	Remove trees	Hol	0	1445												Gurganus										
3772	& limbs	Blvd	5	960												80			200							
40.	Repair		0	9409																						
All	Roads		5	6699		20		**								160	80									
*41.	Plant food	Wild	0	120																						
0008	plots	life	5	40												80										

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
42.	Replace	Near	0	296										C												
3826	return line	1100	5					17						48		80	16									
*43.	Clean Mach.		0	1170																						
3488	Rms	MCB	5	1132								38														
44.	Replace		0	1297																						
3867	Screens	MCB	5	323		40									**											
45.	Do site	Forest	0	1240													RS									
All	Preparation		5	857													40									
*46.	Caulk		0	1333																						
7218	Cracks	LCH	5	1259		74																				
47.	Int.Ext.	BB	0	1328										C												
3318	Repairs	11	5			47		13		8			10	200	40	80										
48.	Int.Ext.	H	0	717		C																				
5164	Repairs	32	5	453		35										5										
*49.	Int.		0	407				Thigpen																		
3487	Repairs	225	5	465		**	**		?			**			**	**										
*50.	Install		0	161	Brown																					
1079	Partition	1202	5	109			4			20					11	17										
51.	Deliver	FC	0	316												C										
3032	soil	400	5	319												**	?									
52.	Repair		0	2097		C					20				80											
5173	Ballfields		5	176			60		9		36				40	40	40									
53.	Repair	AS	0	1040	Franklin																					
4113	Walls	504	5	851		**		40			**				**	22										
*54.	Repair	BA	0	373	Winberry																					
3614	Bldg	144	5	369		?	27			?			**	**	**	**										
55.	Repair	Vic. Hwy	0	345											Fulcher											
3759	Road	172	5	80											5	80	40									

JON	JOB DESCRIPTION	LOC	LC C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
*56.	Repair	AS	0	80				Monk																		
3821	Damages	4012	5		4			68								8										Aust Motors
*57.	Clean	M	0	338												Ward										
2114	Sludge beds	136	5	104												176	58									
58.		FC	0	367												C			RS							
3708	Landscape	400	5													120	40		80							
*59.	Int./Ext	AS	0	218	6	C																				
3094	Repairs	4025	5		1	169		5		27					5	11										
60.	Repair		0	193									C													
3109	Heads	2604	5			5			30				64			14										
61.	Fab Cabinet	TT	0	154		C																				
6006	& Desk	2797	5			80																				
	Housing Hours					160	40	40	40									96								
	Ticket Hours				2700	317	126	52	60	153	139	70	6	33	89	198	100	120	120							
	04 STANDING																									
	TICKET HOURS																									
	TICKETS COMP																									
	TICKETS IN SHOP																									

MINOR JOB ORDERS TO BE COMPLETED BY MAY 28,1982

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
62.	Install	M103	0	32																						
1333	2 A/Cs	LCH 4023	5		32																					
63.	Install	TT	0	48																						
1168	door	43	5			18	8	22																		
64.	Repair		0	55																						
3632	sprinkler	84	5			13							32			10										
65.	Replace		0	33																						
3335	Window	327	5				3	24								6										
66.	Replace	St.	0	6																						
6742	globes	light	5								6															
67.	Install		0	46																						
1244	fan	1201	5			5				12					29											
68.	Install		0	40																						
1180	radiators	1	5				8							32												
69.	Replace	BA	0	15																						
3738	pump	130	5		2									13												
70.	Install		0	19																						
2106	circuit	45	5							19																
71.	Replace		0	4																						
3376	fuses	1042	5								4															
72.	Repair		0	38																						
3646	roof drains	88	5			22									16											
73.	Remove	AS	0	66																						
0313	column	414	5			5	2			4		16			66											
74.	Fab chairs		0	39		C	C																			
2121	& table	2601	5			35	4																			
75.	Install		0	23																						
1346	circuit & AC	1011	5			4				16		3														

MINOR JOB ORDERS THAT ARE BEHIND SCHEDULE

JON	JOB DESCRIPTION	LOC	LOC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
76.	Repair	FC	0	16																						
3740	Rails	415	5												16											
77.	Paint		0	32			C																			
3637	Entrance	89	5	40			?																			
78.	Cut tree		0	70																						
6546	roots	2522	5	61												**	9									
79.	Replace		0	21																						
3062	Lights	413	5							21																
80.	Remove		0	32																						
1099	door	1201	5	30		**	2			**						**										CANCEL
81.	Move	AS	0	81																						
3752	hydrant	2800	5	74									**			**	7									
82.	Replace	AS	0	45						AR	AR															
3374	Coil	202	5	14	**					16	15		**													AR
83.	Replace	S	0	70																						
1043	Booth	1047	5	70		**		**		**	**	?				**	**									
84.	Install		0	18																						
2108	Outlet	915	5	16						2																
85.	Modify	Rds	0	64			AR																			
3515	Markings	Sts	5	48			16																			
86.	Repair		0	21																						
3633	Water line	45	5	21				**					**			?										
87.	Renovate	AS	0	70																						
3736	Mach. room	211	5	290	8		14							?	**											
88.	Install		0	25																						
6021	signs	TT	5	24			**								1											
89.	Replace	S	0	89		AR							AR	AR		AR										
3619	valve	1026	5	119		4							?	15		?										ADD MAT-

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
90.	Fab blinds,		0	51																						
6740	doors etc	as	5	47		**	4																			
91.	Electric	501	0	66																						
5130	repairs	526 535	5	67						?	**															
92.	Remove		0	26																						
3796	doors	303	5			11	5	2							8											
93.	Install		0	52																						
3974	valve	AS	5	12										40	**											
94.	Replace		0	24																						OFF Sch
3036	hydrant	913	5	8									8			8										MAT ordered DOC
95.	Remove		0	24																						
1084	wall	115	5	22		?										6										C
96.	Paint	2604	0	45																						
3119	rooms	2613	5	16			29																			
97.	Replace	TC	0	48		RS																				
3880	doors&screens	BOQ	5	27		21	**																			
98.	Replace		0	37						RS																
4105	pump	1004	5	40						4				?												
99.	Clean	Near	0	55																						
3497	ditch	909	5	49												**	6									
100.	Replace	FC	0	40																						
3301	ByPass	260	5									40														
101.	Replace	S	0	37																						
3576	Stringers	869	5			5												32								
102.	Repair	BB	0	16																						
3792	refractory	9	5	16				?																		C
103.	Asst. 93 On		0	24																						
1115	security cage	107	5			24																				

MINOR JOB ORDERS THAT ARE BEHIND SCHEDULE

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
104.	Alter		0	80																						
3111	Piping	2615	5	66						**				11	3											
105.	Repair	AS	0	8																						
3254	A/C	705	5		8																					Wkg. notice
106.	Replace	Rds	0	32																						
2189	tapes	Sts	5				32																			RAIN
107.	Install		0	44																						
6582	drain	5133	5	12												32										Con

JON	JOB DESCRIPTION	LOC	LC C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
108.	Replace	AS	0	550																						
G168	A/C filters	TC	4	~~296~~ 336	40																				~~40~~	✓
109..	RM Refrig		0	50																						
G258	A/C Elect.	G640	4	~~28~~ 32	4																				~~4~~	✓
110.	PM Heat, refrig	FC	0	462																						
G058	A/C	BA BKs	4	~~282~~ 320	36 ~~38~~																				~~38~~	✓
111.	PM A/C &		0	130																						
G108	Heat controls	MCAS	4	~~56~~ 64	8																				~~8~~	✓
112.	PM Batteries &		0	105																						
L258	Equipt.	MCAS	4	~~28~~ 32	4																				4	✓
113.	PM Air		0	154																						
G808	Comp.	MCB	4	~~84~~ 96													12								~~12~~	✓
114.	PM Commissary		0	163																						
X318	Refrig. equip	1200	4	12							~~13~~	12 ~~13~~													~~12~~	✓
115.	PM Elect	BA BB	0	~~160~~																						
G878	Etc.	RR	4	~~112~~ 128	16																				~~16~~	✓
116.	PM Elect in		0	160																						
G068	BKs	FC	4	~~84~~ 96	12																				~~12~~	✓
117.	RM roof fans		0	100																						
G648	BKs	FC	4	~~56~~ 64	8																				~~8~~	✓
118.	PM	M	0	48																						
G668	Refrig	324 424	4	~~28~~ 32	4																				~~4~~	✓
119.	PM	AS	0	48																						
G678	Refrig.	226 4012	4	~~28~~ 32	4																				~~4~~	✓
120.	PM	BB7	0	48																						
G698	Refrig	RR3	4	~~28~~ 32	4																				~~4~~	✓
121.	PM	FC320	0	75																						
G728	Refrig. BA103	420 540	4	~~42~~ 48	6																				~~6~~	✓

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
122.	PM & replace	RR	0	250																						
G178	filters	BB BKs	4	~~148~~ 168	20																				~~20~~	✓
123.	PM Heat & cooling		0	342																						
G848	Controls	TC	4	~~178~~ 202	24																				~~24~~	✓
124.	Spray horse		0	380																						
L165	Barns		4	~~84~~ 93														12							~~9~~	✓
125.	PM Plumb &	BB	0	540																						
G868	Steam	RR	4	~~352~~ 400	48																				~~48~~	✓
126.	RM Plumb &	FC	0	540																						
G798	Steam	BA	4	~~296~~ 330	40																				~~40~~	✓
127.	PM Elect		0	1375						~~85~~ ~~64~~ ~~106~~																
G018	BKs Etc		4	~~532~~ 538																					~~6~~	✓
128.	PM		0	296																						
G688	Mess Halls		4	154						22															—	✓
129.	PM Galley	Mess	0	200																						
I338	Equipt.	Hall	4	~~112~~ 128						16															~~16~~	✓
130.	Relamp St. &	MCB	0	1040							51															
G028	Floodlights	AS	4	~~456~~ 522							~~64~~														~~66~~	✓
131.	PM	MCB	0	1320							82															
G038	Elect Dist.	AS	4	~~714~~ 808							~~102~~														~~94~~	✓
132.	RM taxi &		0	200																						
G048	runway lights	AS	4	~~32~~							AR														~~32~~	✓
133.	PM & replace	HP	0	77																						
G208	Filters	89	4	~~42~~ 48								6													~~6~~	✓
134.	PM & repair		0	465								32														
G218	Controls	MCB	4	~~252~~ 288								~~36~~													~~36~~	✓
135.	PM Mess Hall		0	288																						
G658	Refrig	MCB	4	176 ~~154~~								22													~~22~~	✓

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
136.	Spray		0	166		1																				
L175	Landfill		4	~~48~~ 51		1												4							~~3~~	✓
137.	Replace		0	32																						
G228	filters	1101	4	~~14~~ 16								2													~~2~~	✓
138.	Pump, hose down	Dep	0	714																						
All	Grease traps	AS	4	~~304~~ 320									16												~~16~~	✓
139.	RM to liquid	MCB	0	288																						
G358 G368	fuel	AS	4	~~168~~ 192										24											~~24~~	✓
140.	PM & service	MCB	0	1140												~~40~~ 80 64	AR 40 ~~37~~								~~36~~	✓
L308	Grease&oil separt	AS	4	~~640~~ 676																						
141.	RM Bituminous		0	5540																						
F015	Rds & Sts		4	96												AR	AR								~~96~~	✓
142.	Haul sand &	water	0	2400																						
All	Catalyst	plant	4	~~96~~ 120												16	AR								~~48~~	✓
143.	Haul		0	2712																						
L105	fly ash		4	~~928~~ 952												24									~~24~~	✓
144.	Pump	AS	0	4160																						
L115	waste oil	MCB	4	~~450~~ 482													3/ ~~40~~								~~32~~	✓
145.	Operate sanitary		0	9600																						
L125	landfill		4	32												AR	AR								~~32~~	✓
146.	Assist shop 75		0	9264																						
L135	with garbage		4	24												AR									~~24~~	✓
147.	Pump out	MCB	0	793									51													
G088 I298	Grease traps	AS	4	~~320~~ 384									~~64~~												~~64~~	✓
148.	Sweep		0	1774																						
L015 L155	Streets	AS	4	~~332~~ 364												26 ~~32~~									~~32~~	✓
149.	Sweep sts &		0	472																						
I025	Parking lots	AS	4	~~164~~ 172													8								~~8~~	✓

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
150.	Spray		0	1400														28							
L035	Mess Halls		4	~~1024~~ 1048		4												~~28~~						~~24~~	RS ✓
151.	Spray for		0	13120														144							
L055	Insects		4	~~5212~~ 5392														~~180~~						180	✓
152.	PM Grounds at	AS	0	3921															96							
All	Qtrs	PP	4	~~4448~~ 4575															~~120~~						~~127~~	✓
153.	PM Plumb	CG	0	1260																						
G888	Steam	MCA	4	~~672~~ 768	96																				~~96~~	✓
154.	PM Plumb		0	200																						
G898	Steam	M Pt	4	~~112~~ 128	16																				~~16~~	✓
155.	PM Commissary	TT	0	82																						
X328	Refrig. Equipt	2455	4	6	6																					✓
156.	PM Commissary	AS	0	82																						
X338	Refrig. Equipt	414	4	6	6																					✓
157.	PM and change		0	120																						
G198	Air filters	MP	4	40	40																					
158.	Read elect.		0																							
K774	meters	All	4	16						16																
159.	PM		0	220																						
G078	Heat sys.	BOQ	4	32									16	16												
160.	Flush			77																						
F085	Sewer												6													
161.	Spray school		0	432																						
All	cafeterias	All	4	14														~~14~~								
162.	Treat for	HP	0	74																						
L235	Roaches	896	4	6														~~6~~								
163.	Treat for	PP	0	72																						
L255	Roaches	2615	4	6														~~6~~								

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
164.	Treat for	BA	0	12																						
L245	Roaches	113	4	2														2								
165.	Treat for	BA	0	12																						
L265	Roaches	115	4	2														2								
166.	Treat for	Beach	0	192																						
L275	Roaches	area	4	8														8								
G-238	PM TLPH Exchange	TC-255 M-167 BB-69	0	57																						
			4		19																					
L-268	PM BAT CHARGERS	MCB	0	82																						
			4							27																
G-378	PM GAS FIRED EQUIP	BA CASERNES	0	48																						
			4		16									16												
F-145	CLEAN OUT SEWER LINES	HP-84		48									4													

WEEK ENDING 5-21-82 Mr Sellers

C-INDICATES COORDINATING SHOP
*-INDICATES TO COMPLETE JOB
**-SHOP COMPLETED

TOTAL PERSONNEL	SUPERVISION			FIXED				E/S BRANCH					LEAVE				OTHER			TICKET				04 STANDING		AVAIL SCHE
JCN	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78		M	T	W	T	F	TOT	REMARKS
1.	Cut	Liste	0	19575																S							
All	Grass	d	4	7079												1000				A							
2.	RM Public	MCB	0	10964																S							
F065	Lawns	AS	4	5497												160	40			A							
3.	RM Storm	MCB	0	6840																S							
F075	Drains	AS	4	4507												116	16			A							
4. G718	RM Public systems		0	2865																S							
G788	BKs, Admin, Etc	HP	4	1544									240	200						A							
5.	Spray for weed	MCB	0	2274																S							
All	Control	AS	4	114														120		A							
6.	RM	Liste	0	4885																S							
All	Steam Dist.	d	4	2215									280							A							
	M&R to unpaved	MCB	0	5480																S							
F115	Rds & Sts	AS	4	3231												60	24			A							
8.	PM Oil fired	Liste	0	40																S							
F125	Furnaces	d	4											40						A							
9.	PM	Emer	0	1035																S							
L288	Generators	Fen	4	514						40							40			A							
10.	RM	3&4	0	924		620														S							
G428	Carp	Area	4	300		480	8													A							
11.	Spray	MCB	0	1500																S							
L045	Hervicides	AS	4	572														120		A							
12.	RM	Din	0	626																S							
L348	Equipt	Fac	4	301	6	6								40						A							
13.	RM	Din	0	1152																S							
G708	P/S	Fac	4	504									40	40						A							

JON	JOB DESCRIPTION	LOC	LC C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
14.	Replace	H	0	440																						
G158	Filters	BKs	4	140								80														Rack
15.	PM	Listed	0	1660																						
G148	A/C		4	560								120														
*16.	RM	3&4	0	460																						
G598	Plaster	area	4	335					125																	
17.	RM	Din	0	288																						
G628	Plaster	Fac	4	84					80																	
18.	Repair	RR	0	150																						
3793	Boiler #46	15	5	46				80																		
19.	Dewinterize		0	864								150														
All	A/C		5	480								80														
*20.	Paint	S	0	374																						
4206	Bleachers	1726	5	338			36																			
21.	Repair		0	1178																						
4222	Feeder	RR	5	92							40															
22.	Access doors		0	1410											Bynum											
7335	& frames	CH	5	249			16	40							80											
*23.	Install doors		0	207											Bynum											
1044	& window bars	1111	5	167			16	-							24											
24.	Install tank		0	3139											Bynum											
7309	& furnaces	LCH	5	1588						72				80	80	40	**									AR
*25.	Remove tree		0	114														Guthrie								
6584	& destump	2113	5													78	9		27							
26.	Build up	AS	0	164												C										
4119	& Repair grounds	154	5													40	16									
*27.	Repair storm	TT	0	212												Ward										
7612	drains & pipes	2	5	168												8	37									

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
*28.	Int.		0	1190									Chase													
3445	Repairs	202	5	1350		**	248	**	**	**			**			**										
*29.	Repalce shower		0	208				Monk																		
4323	Pan	316	5	142				66					**													
30.	Repairs to	S	0	149												C										
3808	Parade field	1727	5													40	16									
31.	Int.&Ext	BB	0	149										Spencer												
3320	Repairs	12	5	986		**	**	8		29			8	13	80	40										
*32.	Replace		0	248		Winberry																				
3042	tile	416	5	127		116	**									5										
33.	Remove trees	Hol.	0	1445												Gurganus										
3772	& Limbs	Brew	5	680												80			120							
34.	Road	Listed	0	9390																						
All	Shoulders		5	6402												240	80									
35.	Food plots	Wild	0	120												48										
0008	for Quail	Life	5													40										
36.	Clean out &		0	144																						
3778	plant shrubbery	1770	5																104							
37.	Clean machine		0	1170																						
3488	Rooms	MCB	5	1092								40														
*38.	Clean sludge		0	176												C										
2118	beds	22	5	164												**	12									
39.	Replace	MCB	0	1297		Smith																				WAIT ON MACHINE
3867	screens	BKs	5	282		40									**											
40.	Do site	Forest	0	1240																						
All	preparation		5	897													40									AR
41.	Caulk		0	1333																						
7218	Cracks	LCH	5	951		160																				

JON	JOB DESCRIPTION	LOC	L C C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
*42.	Replace pit		0	628				C						C												
4285	Pumps	TC	5	602				11								**										
*43.	Replace		0	151						C																
5084	Fixtures	1101	5	64						85						2										
44.	Construct	OP	0	541		Smith																				
0901	Bunker	2	5	460				**		6	**				**											
45.	Partion in		0	161		C						A														
1079	saw shop	1202	5			49		12		16		R				32										
*46.	Int.		0	492					Thigpen																	
5127	Repairs	107	5	462		**	**		C 10	**				**		**										
*47.	Plant	Wild	0	672												Shepard										
2072	Clearing	Life	5	652												72	48									
*48.	Clean & paint	AS	0	245			Wooten																			
3450	Pool	202	5	150			95																			
49.	Annual repairs	Play	0	2097		C																				
5173	to ballfields	Field	5			96										40	40									
50.	Repair & replace	AS	0	1040		C																				
4113	Int. walls	504	5	764				40								16										
51.	Repair road	172	0	345												C										
3759	& Gravel	Hwy	5													40	40									
52.	Clean & prep.	M	0	338												C										
2114	Sludge beds	136	5													80	24									
*53.	Repair	Ind	0	574							Ireland					C										
4271	Feeder	area	5	441							**					24										
*54.	Repair	PT	0	132		C																				
3645	Heads	30	5			108	10						8			6										
55.	Int. repairs	M	0	435			C																			
3406	& paint	609	5			64	64		7																	

JON	JOB DESCRIPTION	LOC	LOC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
56.	Replace	M 412	0	165																						
5100	Fixtures	413	5							40																RES
57.	Ext. Repairs	AS	0	296																						
3555	& Paint	4110	5			47																				
*58.	Install water	A2	0	206									Chase													
1136	Lines	A3	5	102				**					80													
3679	Ball Fields																									
3680	"																									
	Housing Hours					160	40	40	40									96								
	Ticket Hours					328	129	73	56	112	34	92	687		95	426	82	118	71							
	04 STANDING																									
	TICKET HOURS																									
	TICKETS COMP																									
	TICKET IN SHOP																									

MINOR JOB ORDERS TO BE COMPLETED BY 5-21-81

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
59.	Install stairway		0	41																						
0402	Treads	15	5			41																				
60.	Repair	RR	0	8	C																					
3100	A/C	1	5		8																					
61.	Remove		0	19	-																					
3773	Elect.	229	5							19																
62.	Replace	RR	0	16																						
3230	Heater	3	5		16																					RS
63.	Repair		0	55																						
3632	Sprinklers	84	5			13							32			10										
64.	Int.	M	0	35																						
5118	Repairs:	101	5			29				6																
65.	Construct		0	33																						
1262	Offices	1817	5	16						17																
66.	Repair		0	12																						
3666	Collector	1202	5							12																
67.	Remove		0	19																						
3774	Elect.	330	5							19																
68.	Window		0	60																						
1011	Bars	1041	5	19			**	-							41											
69.	Patch		0	68																						
3460	Plaster	2605	5				60		8																	
70.	Modify		0	28																						
1123	2 doors	537	5			14	4								10											
71.	Fab.		0	40																						
1153	Handrail	1041	5				4	4							32											
72.	Repairs &		0	53																						
3290	Paint	203	5			23	11		14							5										

MINOR JOB ORDERS TO BE COMPLETED BY 5-21-82

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
73.	Rehab.	SBB	0	60							C															
3525	Lighting	25	5								60															
74.	Raise		0	36																						
6539	Stepping stones	2122	5													32	2	2								RS
75.	Repair		0	41																						
3437	Sheetrock	438	5			28	5			8																
6739		CH																								
1347	AC	1211																								
1354	CARNIVAL	TT																								

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	TV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
~~76.~~ 108	Replace	AS	0	550																						
G168	A/C filters	TC	4	~~256~~ 296	40																					
~~77.~~ 109	RM Refrig		0	50																						
G258	A/C Elect.	G640	4	~~24~~ 28	4																					
~~78.~~ 110	PM Heat, refrig	FC	0	462																						
G058	A/C	BA BKs	4	~~244~~ 282	38																					
~~79.~~ 111	PM A/C &		0	130																						
G108	Heat controls	MCAS	4	~~48~~ 56	8																					
~~80.~~ 112	PM Batteries &		0	105																						
I258	Equipt.	MCAS	4	~~24~~ 28	4																					
~~81.~~ 113	PM Air		0	154																						
G808	Comp.	MCB	4	~~72~~ 84													12									
82.	RM Refrig.in		0	253																						
~~X308~~	1200,TT2455,AS414		4	120	8							12														
~~83.~~ 114	PM Elect	BA	0	160																						
G878	Etc.	BB RR	4	96 112	16																					
~~84.~~ 115	PM Elect in		0	160																						
G068	BKs	FC	4	~~72~~ 84	12																					
~~85.~~ 116	RM roof fans		0	100																						
G648	BKs	FC	4	~~48~~ 56	8																					
~~86.~~ 117	PM	M	0	48																						
G668	Refrig	324 424	4	~~24~~ 28	4																					
~~87.~~ 118	PM	AS	0	48																						
G678	Refrig.	226 4012	4	~~24~~ 28	4																					
~~88.~~ 119	PM	BB7	0	48																						
G698	Refrig	RR3	4	~~24~~ 28	4																					
~~89.~~ 120	PM	FC320	0	75																						
G728	Refrig. BA103	420 540	4	~~36~~ 42	6																					

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
~~90.~~ 121	PM & replace	RR	0	250																						
G178	filters	BB BKs	4	~~128~~ 148	20																					
~~91.~~ 122	PM Heat & cooling		0	342																						
G848	Controls	TC	4	~~154~~ 178	24																					
~~92.~~ 123	Spray horse		0	380																						
L165	Barns		4	~~72~~ 84														12								
~~93.~~ 124	PM Plumb &	BB	0	540																						
G868	Steam	RR	4	~~304~~ 352	48																					
~~94.~~ 125	RM Plumb &	FC	0	540																						
G798	Steam	BA	4	~~256~~ 296	40																					
~~95.~~ 126	PM Elect		0	1375																						
G018	BKs Etc		4	~~426~~ 532						106																
~~96.~~ 127	PM		0	296																						
G688	Mess Halls		4	~~132~~ 154						22																
~~97.~~ 128	PM Galley	Mess	0	200																						
I338	Equipt.	Hall	4	~~96~~ 112						16																
~~98.~~ 129	Relamp St. &	MCB	0	1040																						
G028	Floodlights	AS	4	~~392~~ 456							64															
~~99.~~ 130	PM	MCB	0	1320																						
G038	Elect Dist.	AS	4	~~612~~ 714				-			102															
~~100.~~ 131	RM taxi &		0	200																						
G048	runway lights	AS	4								AR															
~~101.~~ 132	PM & replace	HP	0	77																						
G208	Filters	89	4	~~36~~ 42								6														
~~102.~~ 133	PM & repair		0	465																						
G218	Controls	MCB	4	~~216~~ 252								36														
~~103.~~ 144	PM Mess Hall		0	288																						
G658	Refrig	MCB	4	~~132~~ 154								22														
145	PM commisary		0	163																						
X318	REFRIG EQUIP	1200	4			-						13														

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
~~104.~~ 147	Spray		0	166																						
L175	Landfill		4	~~44~~ 48														4								
147																										
~~105.~~	Replace		0	32																						
G228	filters	1101	4	~~12~~ 14								2														
148																										
~~106.~~	Pump, hose down	Dep	0	714																						
All	Grease traps	AS	4	~~288~~ 304									16													
149																										
~~107.~~	RM to liquid	MCB	0	288																						
G358	fuel	AS	4	~~144~~ 168										24												
~~G368~~ 150																										
~~108.~~	PM & service	MCB	0	1140																						
L308	Grease&oil separt	AS	4	~~520~~ 640												80	40									
151																										
~~109.~~	RM Bituminous		0	5540																						
F015	Rds & Sts		4	]												AR	AR									
152																										
~~110.~~	Haul sand &	water	0	2400																						
All	Cataylyst	plant	4	96												16	AR									
~~111.~~ 153	Haul		0	2712																						
L105	fly ash		4	928												24										
~~112.~~	Pump	AS	0	4160																						
154 L115	waste oil	MCB	4	~~410~~ 450													40									
~~113.~~ 155	Operate sanitary		0	9600																						
L125	landfill		4													AR	AR									
~~114.~~	Assist shop 75		0	9264																						
156 L135	with garbage		4													AR										
157																										
~~115.~~	Pump out	MCB	0	793																						
G088	Grease traps	AS	4	~~320~~ 256									64													
~~116.~~ 158	Sweep		0	1774																						
LO15	Streets	AS	4	~~300~~ 332												32										
~~117.~~	Sweep sts &		0	472																						
159 LO25	Parking lots	AS	4	~~167~~ 156													8									

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
~~118.~~ 160	Spray		0	1400																						
L035	Mess Halls		4	~~996~~ 1024														28								
~~119.~~ 161	Spray for		0	13120																						
L055	Insects		4	5212														180								
~~120.~~ 162	PM Grounds at	AS	0	3921																						
All	Qtrs	PP	4	~~3328~~ 4448															120							
~~121.~~ 163	PM Plumb	CG	0	1260																						
G888	Steam	MCA	4	576 672	96																					
~~122.~~ 164	PM Plumb		0	200																						
G898	Steam	M Pt	4	~~96~~ 112	16																					
~~123.~~ 165	PM		0	100																						
G768	Lift Stations		4	34						34																
124.	PM	TT	0	72																						
~~T585~~	Controls	5400	4	~~56~~ 64								8													8	
125.	PM		0	8																						
G778	Air compressors	MGB	4	8													8									
126.	PM	Lot	0	96																						
U215	Fork lift	203	4														8									
127.	PM		0	896																						
L065	Compactors		4	224													32									
165	PM COMMISSARY	TT2455	0	82																						
X328	REFRIG. EQUIP		4		6																					
166	PM COMMISSARY	AS-414	0	82																						
X338	REFRIG EQUIP		4		6																					
167	PM AND CHANGE AIR FILTERS	MP	0	120																						
G-198			4		40																					
168			0																							
K-774	REMD ELEC MOTORS	All	4							16																
169 G-078	PM HEAT SYS BOO		0	220									16	16												
170 F-085	Flush SEWER		4	22									6													

MAY 21

JON	JOB DESCRIPTION	LOC	LC C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
99.	Replace	AS	0	550																						
G168	A/C filters	TC	4	~~216~~ 256	40																					
100.	RM Refrig		0	50																						
G258	A/C Elect.	G640	4	~~20~~ 24	4																					
101	PM Heat, refrig	FC	0	462																						
G058	A/C	BA BKs	4	~~206~~ 244	38																					
102.	PM A/C &		0	130																						
G108	Heat controls	MCAS	4	~~40~~ 48	8																					
103.	PM Batteries &		0	105																						
L258	Equipt.	MCAS	4	~~20~~ 24	4																					
104.	PM Air		0	154																						
G808	Comp.	MCB	4	~~60~~ 72													12									
105.	RM Refrig.in		0	253																						
X308	1200,TT2455,AS414		4	~~100~~ 120	8							12														
106.	PM Elect	BA	0	160																						
G878	Etc.	BB RR	4	~~80~~ 96	16																					
107.	PM Elect in		0	160																						
G068	BKs	FC	4	~~60~~ 72	12																					
108.	RM roof fans		0	100																						
G648	BKs	FC	4	~~40~~ 48	8																					
109.	PM	M	0	48																						
G668	Refrig	324 424	4	~~20~~ 24	4																					
110.	PM	AS	0	48																						
G678	Refrig.	226 4012	4	~~20~~ 24	4																					
111.	PM	BB7	0	48																						
G698	Refrig	RR3	4	~~20~~ 24	4																					
112.	PM	FC320 420	0	75																						
G728	Refrig. BA103	540	4	~~30~~ 36	6																					

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
113. G178	PM & replace filters	RR BB BKs	0	250																						
			4	~~108~~ 128	20																					
114. G848	PM Heat & cooling Controls	TC	0	342																						
			4	~~130~~ 154	24																					
115. L165	Spray horse Barns		0	380																						
			4	~~60~~ 72														12								
116. G868	PM Plumb & Steam	BB RR	0	540																						
			4	~~256~~ 304	48																					
117. G798	RM Plumb & Steam	FC BA	0	540																						
			4	~~216~~ 256	40																					
118. G018	PM Elect BKs Etc		0	1375																						
			4	~~362~~ 426						106																
119. G688	PM Mess Halls		0	296																						
			4	~~110~~ 132						22																
120. I338	PM Galley Equipt.	Mess Hall	0	200																						
			4	~~80~~ 96						16																
121. G028	Relamp St. & Floodlights	MCB AS	0	1040																						
			4	~~328~~ 392							64															
122. G038	PM Elect Dist.	MCB AS	0	1320																						
			4	~~510~~ 612							102															
123. G048	RM taxi & runway lights	AS	0	200																						
			4								AR															
~~124~~ 123. G208	PM & replace Filters	HP 89	0	77																						
			4	~~30~~ 36								6														
125. G218	PM & repair Controls	MCB	0	465																						
			4	~~180~~ 216								36														
126. G658	PM Mess Hall Refrig	MCB	0	288																						
			4	~~110~~ 132								22														

JON	JOB DESCRIPTION	LOC	LC	TOTAL	ES	CA	PT	MAS	PL	EL	ED	RA	PLU	PI	MW	GK	HE	IV	LDS	M	T	W	T	F	TOT	REMARKS
			C	SCHED	31	41	43	44	45	51	52	53	61	62	63	71	72	76	78							
171	SPRAY SCHOOL		0	432																						
All	CAFETERIAS	All	4															14								
172		HP	0	74																						
L235	TREAT FOR ROACHES	896	4															6								
173	TREAT FOR	PP	0	72																						
L255	ROACHES	2615	4															6								
174		BA113	0	12																						
L245	TREAT FOR ROACHES		4															2								
175		BA115	0	12																						
L265	TREAT FOR ROACHES		4															2								
176		BEACH AREA	0	192																						
L275	TREAT FOR ROACHES		4															8								
L305	LOAD TEST																6									

MAY 21

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
		YT	0	72																						
T585	PM CONTROLS	SHOP	4	56								8														
			0	8																						
X778	PM Air Compressors	MCB	4														8									
		LOT	0	96																						
4215	PM FORK LIFT	203	4														8									
			0	896																						
LD65	PM COMPACTORS		4	224													32									

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
127.	Spray		0	166														4								
L175	Landfill		4	~~40~~ 44														8								
128.	Replace		0	32																						
G228	filters	1101	4	~~10~~ 12								2														
129.	Pump, hose down	Dep	0	714																						
All	Grease traps	AS	4	~~272~~ 288									16													
130.	RM to liquid	MCB	0	288																						
G358 G368	fuel	AS	4	~~120~~ 144										24												
131.	PM & service	MCB	0	1140																						
L308	Grease&oil separt	AS	4	~~464~~ 520												80	40									
132.	RM Bituminous		0	5540																						
F015	Rds & Sts		4													AR	AR									
133.	Haul sand &	water	0	2400																						
All	Cataylyst	plant	4	~~80~~ 96												16	AR									
134.	Haul		0	2712																						
L105	fly ash		4	~~904~~ 928												24										
135.	Pump	AS	0	4160																						
L115	waste oil	MCB	4	~~370~~ 410												40	40									
136,	Operate sanitary		0	9600																						
L125	landfill		4													AR	AR									
137.	Assist shop 75		0	9264																						
L135	with garbage		4													AR										
138.	Pump out	MCB	0	793																						
G088 I298	Grease traps	AS	4	~~192~~ 256									64													
140.	Sweep		0	1774																						
L015 L155	Streets	AS	4	~~278~~ 300												32										
141.	Sweep sts &		0	472																						
L025	Parking lots	AS	4	~~148~~ 156													8									

MAY 21

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
142.	Spray		0	1400																						
L035	Mess Halls		4	~~868~~ 996														28								
143.	Spray for		0	13120																						
L055	Insects		4	~~5032~~ 5212														180								
144.	PM Grounds at	AS	0	3921																						
All	Qtrs	PP	4	~~3208~~ 3325															120							
145.	PM Plumb	CG	0	1260																						
G888	Steam	MCA	4	~~480~~ 576	96																					
146.	PM Plumb		0	200																						
G898	Steam	M Pt	4	~~80~~ 96	16																					
147.	PM Batt.		0	39																						
L278	Chargers	FC	4	12	12																					
148.	PM	TT	0	72																						
T575	Controls	60	4	56								8														
149.	PM		0	220																						
G078	Heating	BOQ	4	64									16	16												
150.			0	416																						
U225	Service	Lot																								
U235	Cranes	203	4	112													16									
151.	Spray		0	432																						
All	Cafeterias	Sch	4	266														14								
152.	Treat for	BA	0	12																						
L245	Roaches	113	4	2														2								
153.	Treat for	BA	0	12																						
L265	Roaches	115	4	2														2								
154.	Treat for		0	192																						
L275	roaches	BA	4	96														8								
			0	100																						
2768	PM LIFT STATIONS		4	34						34																

WEEK ENDING 5-14-82 MR. BROWN

C-INDICATES COORDINATING SHOP
*-INDICATES TO COMPLETE JOB
**-SHOP COMPLETED

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78		M	T	W	T	F	TOT	REMARKS
	TOTAL PERSONNEL / SUPERVISION / FIXED / E/S BRANCH / LEAVE / OTHER / TICKET / 04 STANDING / AVAILA SCHE																										
1.	Cut	Listed	0	19575																							
All	Grass		4	5752												1240 ~~800~~				S							
																				A							
2.	RM Public	MCB	0	10964																							
F065	Lawns	AS	4	5421												40	40			S							
																				A							
3.	RM Storm	MCB	0	6840																							
F075	Drains	AS	4	4467												40	16			S							
																				A							
4.	RM P/S Systems		0	2865																							
G718																				S							
G788	BKs Admin, ETC	HP	4	1212									160	200						A							
5.	RM Steam	Listed	0	4885																							
All	Dist		4	1844										380						S							
																				A							
6.	M&R to unpaved	MCB	0	5480																S							
F115	Rds & Sts	AS	4	3131												60	24			A							
7.	PM	Emerg	0	1035																S							
L288	Generators	Gen	4	434						40							40			A							
8.	Spray	MCB	0	1500																							
L045	Hervicides	AS	4	504														120 ~~80~~		S							
																				A							
9.	Spray weed	MCB	0	2274																							
All	Control	AS	4															80 ~~120~~		S							
																				A							
10.	RM	Din	0	1152																							
G708	P/S	Fac	4	424									40	40						S							
																				A							
11.	RM	Din	0	626																							
L348	Equipt.	Fac	4	255	6									40						S							
																				A							
12.	RM	B&4	0	924																							
G428	Carp.	area	4	8		240														S							
																				A							
13.	RM	BEQ	0	420																							
G528	Masonry	1&2	4	136				24												S							
																				A							

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
14.	RM	BEQ	0	460					AR																	
G598	Plaster	3&4	4	335					~~125~~																	
15.	Replace	H	0	440																						
G158	filters	BKs	4	80								60														
16.	RM	Mess	0	870																						
G748	Carp.	Halls	4	564		**	8								AR											
*17.	RM	MP	0	64																						
G488	Masonry	BEQ	4	59				6																		
18.	RM	Din	0	288																						
G628	Plaster	Fac	4						84																	
19.	PM	Listed	0	1660																						
G148	A/Cs		4	440								120														
20.	Replace		0	151						C SNOW																
5084	Lights	1101	5							~~100~~ 60						4										
21.	Dewinterize		0	864																						
All	A/C		5	400								80														
*22.	Paint	S	0	374																						
4206	Bleachers	1726	5	234			80																			
*23	Replace shower		0	208				Monk																		
4323	Pan	316	5	57				80					**			5										
*24.	Remove & replace	BA	0	954		Smith																				
3237	shingles	104	5	552		381										21										
25.	Repair		0	1178																						
4222	feeder	RR	5	156							AR															
26.	Install door		0	207										Bynum												
1044	& window bars	1111	5	40		7				40					80											
27.	Install tanks		0	3139										Bynum												
7309	& furnaces	LCH	5	1380						~~72~~ 40				80	80	40	**									

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
28.	Repair storm	TT	0	212												Ward L	40									
7612	Drain pipes	2	5	60												84	~~68~~									
29.	Int.		0	1190			160						Chase													
3445	repairs	202	5	1146		**	~~200~~	**		**			**			**										
*30.	Replace 8	BB	0	172				Monk																		
3202	windows	11	5	86				80								6										
31.	Int. &Ext	BB	0	1419										Spencer												
3320	Repairs	12	5	558		**	**		AR	40				~~160~~ 200	40	40										
32.	Remove trees	Hol.	0	1445												Gurganus										
3772	& Limbs	Brew. Blvd.	5	692												80			200							
33.	Repair road	Listed	0	9390												184										
All	Shoulders		5	6052				5								~~120~~	80									
34.	Do site	Forest	0	1240																						
All	Preparation		5	865													40									
35.	Caulk		0	1333																						
7218	Cracks	LCH	5	967		160																				
36.	Renovate		0	1300		Winberry																				
0900	Int.	225	5	892			~~135~~ 145	**	**				**			**										
37.	Replace		0	248		C Winberry																				
3042	tile	416	5	3		120	**	-								4										
*38.	Int.		0	492					Thigpen																	
5127	Repairs	107	5	441		**	**		31	**				**		**										
39.	Plant	Wild	0	672												Shepard										
2072	Clearing	Life	5	336												120	40									
*40.	Construct		0	103			BS								C BS											
2109	Rack	1202	5																							
41.	Repair&Replace	AS	0	1040		C																				
4113	Int. walls	504	5	442		146					4				45	80										

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
*42.	Const. base	24	0	104		Winberry																				
1039	for ant. tower	Ant	5	61		**		**							4	32	7									
43.	Clean machine		0	1170																						
3488	room	MCB	5	1052								40														
*44.	Replace	TC	0	177		C FRANKLIN																				
3882	Screens		5	166		**	?																			
*45.	Food plots	Wild	0	120												RS										
0008	for Quail	Life	5													~~120~~										
*46.	Repairs gutters		0	91												C Shepard										
3779	asphalt lot	898	5					12								71	8									
47.	Repairs to	S	0	149												C Fulchey										
3808	parade field	1727	5													AR ~~117~~	AR ~~32~~									
*48.	Prepare	FC	0	388													40									
4055	Ballfields	area	5	365													82									
49.	422 Access		0	1410																						
7335	doors&frames	CH	5	185			AR	AR							AR											
50.	Replace	MCB	0	1297		C Smith																				
3867	screens	BKs	5	211		40									**											
51.	Replace		0	337																						
4285	pit pumps	TC	5	600				2-					?	?		**										
52.	Construct	OP	0	541		~~52~~ C									~~13~~ 14											
0901	Bunker	2	5	375		~~32~~		**		6	**	12		RS ~~19~~	~~39~~											
*53.	Deliver	FC	0	316												C Fulchey										
3032	top soil	400 area	5	263												40	13									
54.	Repair	GP	0	135									Chase													
3180	head	26	5	133		**	**			**			18			**										
55.	Repair	Ind.	0	574																						
4271	feeder	area	5	417							**					24										

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
56.	Lower culvert	1800	0	206																						
3741	remove silt	area	5	165												29	12									
57.	Int.& Ext.		0	129									**													
3325	repairs head	1820	5	212		?	**			**			?		12	?										
58.	Prepare		0	281																						
1813	playfield	Sch	5	250												32	**	**								
*59.	Repair	BA	0	373		C																				
3614	fire damage	144	5	273			100																			
*60.	Replace		0	251								Lane														
4209	A/C	1202	5	252		5		**		**		**	**	**	**	**	**									
61.	Clean & Paint	AS	0	245			C Wooten																			
3450	Pool	202	5				120									30										
	Housing Hours					160	40	40	40									96								
	Ticket Hours					323	42	67	60	125	42	78		610	69	477	86	130	122							
	04 STANDING																									
	TICKET HOURS																									
	TICKETS COMP.																									
	TICKETS IN SHOP																									

MINOR JOB ORDERS TO BE COMPLETED BY 5-14-82

JON	JOB DESCRIPTION	LOC	LC CC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
62.	Install	AS	0	18																						
1329	A/C	3000	5		14			4																		
63.	Deliver	Hyde	0	32													xx									
0610	fire pumps	Co	5	16										X			16									
64.	Relocate	G	0	27																						
1086	two ovens	640	5							11					16											
65.	Paint	AS	0	60																						
3256	rooms	705	5				60																			
66.	Repair	S504 515	0	55																						
3728	Hanger doors	518	5		55																					
67.	Install	BB	0	16																						
2006	circuits	50	5							16																
68.	Fab.		0	23																						
2024	30 signs	PMO	5				16								7											
69.	Move	AS	0	81													8									
3752	hydrant	2800	5										32			34	~~15~~									
70.	Wire	BB	0	16																						
1248	Office spaces	7	5							16																
71.	Repair	Hol.	0	42													delete xx									
3753	water main	Blvd	5										**				6		20							
72.	Install		0	18																						
2108	outlet	915	5							18																
73.	Repair	M	0	46																						
3754	Water main	411	5										32			14										
74.	Rkeplace		0	24																						
3591	Exp. joint	115	5											24												
75.	Refinish		0	26																						
3617	floor	115	5				26																			

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
76.	Replace	TC	0	16																						
3805	Cond. pump	701	5		16																					
77.	Remove		0	66																						
1131	office	1201	5			23				16						27										
78.	Fab for stock	AS	0	47																						
6740	blinds, screendoors	Hsg.	5			47																				
79.	Remove		0	26																						
3796	doors	303	5			11	5	2																		
80.	Fab		0	45																						
2063	signs	AS	5				40								5											
81.	Install		0	5																						
1141	venet. blinds	426	5	3		2																				
82.	Install		0	5																						
1142	venet. blinds	427	5	3		2																				
83,	Relocate		0	62																						
1485	Primary	1750	5								62															
84	Replace	M	0	78																						
3251	Screens	202	5			64	4						33			10										
85.	Replace	M	0	38																						
3565	condenser	129	5	16	6							16														
86.	Install		0	39																						
1111	showers	1117	5					6																		
87.	Repair	BB	0	16																						
3792	Refractory	9	5					16																		
88.	Modify	M	0	21																						
1140	frame	104	5			19									2											
89.	Repair	RR	0	30				RS																		
3794	Refractory	15	5					30																		

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
90.	Repair		0	6																						
4204	A/C	1101	5									6														
91.	Install	LCH	0	26																						
1052	Lighting	4014	5								26															
92.	Install	AS	24																							
3801	conduit	504								24																
93.	Install hot	AS	0	24																						
3303	water lines	4012	5										24													
94.	Replace		0	16																						
3426	coil	2615	5											16												
95.	Replace	59	0	43																						
3624	cond. pumps	RR11	5	38					5																	
96.	Replace	84	0	77																						
3625	cond. pumps	RRB RR10	5	64						13				**												
97.	Replace		0	21																						
3062	Lights	413	5							21																
98.	Paint	S	0	76																						
3566	Border	769	5	54			**												22							
	Refractory	RR15				6		HD																		

JON	JOB DESCRIPTION	LOC	LC C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
99.	Replace	AS	0	550																						
G168	A/C filters	TC	4	216	40																					
100.	RM Refrig		0	50																						
G258	A/C Elect.	G640	4	20	4																					
101	PM Heat, refrig	FC	0	462																						
G058	A/C	BA BKs	4	206	38																					
102.	PM A/C &		0	130																						
G108	Heat controls	MCAS	4	40	8																					
103.	PM Batteries &		0	105																						
L258	Equipt.	MCAS	4	20	4																					
104.	PM Air		0	154																						
G808	Comp.	MCB	4	60													12									
105.	RM Refrig.in		0	253																						
X308	1200,TT2455,AS414		4	100	8							12														
106.	PM Elect	BA	0	160																						
G878	Etc.	BB RR	4	80	16																					
107.	PM Elect in		0	160																						
G068	BKs	FC	4	60	12																					
108.	RM roof fans		0	100																						
G648	BKs	FC	4	40	8																					
109.	PM	M	0	48																						
G668	Refrig	324 424	4	20	4																					
110.	PM	AS	0	48																						
G678	Refrig.	226 4012	4	20	4																					
111.	PM	BB7	0	48																						
G698	Refrig	RR3	4	20	4																					
112.	PM	FC320	0	75																						
G728	Refrig. BA103	420 540	4	30	6																					

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
113.	PM & replace	RR	0	250																						
G178	filters	BB BKs	4	108	20																					
114.	PM Heat & cooling		0	342																						
G848	Controls	TC	4	130	24																					
115.	Spray horse		0	380																						
L165	Barns		4	60														12								
116.	PM Plumb &	BB	0	540																						
G868	Steam	RR	4	256	48																					
117.	RM Plumb &	FC	0	540																						
G798	Steam	BA	4	216	40																					
118.	PM Elect		0	1375						67																
G018	BKs Etc		4	362						~~106~~																
119.	PM		0	296																						
G688	Mess Halls		4	110						22																
120.	PM Galley	Mess	0	200																						
I338	Equipt.	Hall	4	80						16																
121.	Relamp St. &	MCB	0	1040																						
G028	Floodlights	AS	4	328							64															
122.	PM	MCB	0	1320																						
G038	Elect Dist.	AS	4	510							102															
123.	RM taxi &		0	200																						
G048	runway lights	AS	4								AR															
124.	PM & replace	HP	0	77																						
G208	Filters	89	4	30								6														
125.	PM & repair		0	465																						
G218	Controls	MCB	4	180								36														
126.	PM Mess Hall		0	288																						
G658	Refrig	MCB	4	110								22														

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
127.	Spray		0	166														4								
L175	Landfill		4	40																						
128.	Replace		0	32																						
G228	filters	1101	4	10								2														
129.	Pump, hose down	Dep	0	714																						
All	Grease traps	AS	4	272									16													
130.	RM to liquid	MCB	0	288																						
G358 G368	fuel	AS	4	120										24												
131.	PM & service	MCB	0	1140												40 ~~80~~	16 ~~40~~									
L308	Grease&oil separt	AS	4	464																						
132.	RM Bituminous		0	5540																						
F015	Rds & Sts		4													AR	AR									
133.	Haul sand &	water	0	2400																						
All	Cataylyst	plant	4	80												16	AR									
134.	Haul		0	2712																						
L105	fly ash		4	904												24										
135.	Pump	AS	0	4160																						
L115	waste oil	MCB	4	370													40									
136,	Operate sanitary		0	9600																						
L125	landfill		4													AR	AR									
137.	Assist shop 75		0	9264																						
L135	with garbage		4													AR										
138.	Pump out	MCB	0	793																						
G088 I298	Grease traps	AS	4	192									64													
140.	Sweep		0	1774																						
I015 L155	Streets	AS	4	278												32										
141.	Sweep sts &		0	472																						
I025	Parking lots	AS	4	148													8									

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
142.	Spray		0	1400																						
L035	Mess Halls		4	868														28								
143.	Spray for		0	13120																						
L055	Insects		4	5032														180								
144.	PM Grounds at	AS	0	3921																						
All	Qtrs	PP	4	3208															120							
145.	PM Plumb	CG	0	1260																						
G888	Steam	MCA	4	480	96																					
146.	PM Plumb		0	200																						
G898	Steam	M Pt	4	80	16																					
147.	PM Batt.		0	39																						
L278	Chargers	FC	4	12	12																					
148.	PM	TT	0	72																						
T575	Controls	60	4	56								8														
149.	PM		0	220																						
G078	Heating	BOQ	4	64									16	16												
150. U225 U235	Service Cranes	Lot 203	0	416																						
			4	112													16									
151.	Spray		0	432														RS								
All	Cafeterias	Sch	4	266														~~14~~								17 to 28
152.	Treat for	BA	0	12														RS								
L245	Roaches	113	4	2														~~2~~								26
153.	Treat for	BA	0	12														RS								
L265	Roaches	115	4	2														2								26
154.	Treat for		0	192														RS								
L275	roaches	BA	4	96														~~8~~								26

WEEK ENDING 5-7-82 — Mr Brown

C-INDICATES COORDINATING SHOP
*-INDICATES TO COMPLETE JOB
**-SHOP COMPLETED

TOTAL PERSONNEL	SUPERVISION	FIXED				E/S BRANCH					LEAVE				OTHER				TICKET					O/T STANDING		AVAIL SCHE
JCN	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78		M	T	W	T	F	TOT	REMARKS
1.	Cut	Listed	0	19575												1000				S							
All	Grass		4	4796												800				A							
2.	RM Public	MCB	0	10964												?				S							
F065	Lawns	AS	4	5230												160	40			A							
3.	RM Storm	MCB	0	6840																S							
F075	Drains	AS	4	4108												116	16			A							
4.	RM P/S systems		0	2865									160	200						S							
G718																											
G788	BKs, Admin, Etc	HP	4	1004									~~120~~	~~160~~						A							
5.	RM	Listed	0	4885																S							
All	Steam Dist.		4	1354										380						A							
6.	M&R to unpaved	MCB	0	5480													?			S							
F115	Rds&Sts	AS	4	3047												60	24			A							
7.	PM	Emer	0	1035																S							
L288	Generators	Gen	4	354						40							40			A							
8.	Spray	MCB	0	1500														?		S							
L045	Herbicides	AS	4	456														120		A							
9.	RM	Din	0	626																S							
L348	Equipt	Fac	4	209	6									40						A							
10.	RM	Din	0	1152																S							
G708	P/S	Fac	4	344									40	40						A							
11.	PM	Listed	0	1660																S							
G148	A/C		4	440								120								A							
12.	RM		0	40																S							
G388	Locks	1041	4	12		8				4										A							
13.	RM	Mess	0	870		~~8~~														S							
G748	Carp	Halls	4	440		306	16								40					A							

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	TV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
14.	RM	3&4	0	924		AR																				
G428	Carp	area	4			~~140~~	8																			
15.	RM	Din	0	288					RS																	
G628	Plaster	Fac	4						~~186~~																	
16.	RM	1&2	0	420				96 ?																		
G528	Masonry	area	4	40				~~140~~																		
17.	Dewinterize		0	864																						
All	A/Cs		5	400								80														
18.	Remove &	BA.	0	954		Smith										?										
3237	Replace shingles	104	5			520										32										
*19.	Wire 5		0	89						Snow																
0315	office modules	1301	5	69						19	**															
20.	Repair	RR	0	1178							16															
4222	Feeder	Feeder	5	76							~~80~~															
21.	Install tanks		0	2957											Bynum											
7309	and furnaces	LCH	5	1071						40				80	80	AR										
22.	Ext.&Int.	M.H.	0	200		Smith																				
All	Repairs	2,3, 5,6	5	190		**	66			**			**	**												
23.	Repair		0	1137											Bynum											
2155	Dumpsters		5	627			16								80	4										
24.	Prepare		0	388												Fulcher										
4055	Ballfields	FC	5	278												80	40									
*25.	Repair storm	TT	0	212												C WARD										
7612	Drain pipes	2	5													40	20									
26.	Int.		0	1190			~~200~~		?				Chase													
3445	Repairs	202	5	782		**	~~120~~	**	40	**			**			**										
*27.	Lower culvert	1800	0	206												Fulcher										
3741	Remove silt	area	5	120												63	23									

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
28.	Replace	BB	0	172				Monk																		
3202	Windwos	11	5					80								6										
*29.	Wash down &	S	0	170			C	Wooten																		
3449	Paint pools	2632 2631	5	101			69									**										
30.	Int. & Ext,	BB	0	1299										Spencer												
3320	Repairs	12	5	267					120	40				~~200~~ 160	~~RS~~ ~~40~~	AR ~~40~~										
31.	Repair road	L	0	8897												? C										
All	Shoulders	Isted	5	5757												240	~~80~~ 40									
32.	Clear right	RR	0	5021							Ireland															
3161	of way	AS TC	5	5021							**					**	XY 22		**							
33.	Clean		0	1170								AR 64														
3488	Mach rooms	MCB	5	1040																						
34.	Install		0	207																						
1044	door & bars	1111	5												40											
35.	Do site	F	0	1240																						
All	Preparation	Q Test	5	801													40									
36.	Caulk		0	1333																						
7218	Cracks	LCH	5	871		160																				
37.	Renovate		0	1300		Winberry				AR																
0900	Int.	225	5	809		40 XY	AR	**	**	72			**		22	**										
38.	Construct	OP	0	409		Smith																				
0901	Bunker	2	5	335		AR		**		AR	**	AR			AR											
*39.	Relamp	AS	0	150																						
3098	fixtures	504	5	104						26																
40.	Deliver top	FC 400	0	316																						
3032	Soil grounds		5	196												80										
41.	Int.		0	492				Thigpen																		
5127	Repairs	107	5	363		**	**		~~BD~~ 40	**				**		**										

JON	JOB DESCRIPTION	LOC	LOC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
42.	Plant	wild	0	672												Shepard										
2072	Clearing	life	5	320												~~64~~ 40	40									
43.	Repair & Paint		0	304		C Winberry																				
4198	office & head	1502	5	146		**	200																			
44.	Repair or replace	AS	0	1040		~~200~~																				
4113	int. walls	504	5	232		~~160~~																				
45.	Repair	Ind	0	430							Ireland															
4271	feeder	area	5	417							**					?										
46.	Remove trees	Hol.	0	1445												C Burgess										
3772	& Linbs	Blvd	5													120			240							
3614	Fire DAMAGE	BA 114	0 5			? 100				R 16			13	16	75	53										
									24																	
	Housing Hours					160	40	40	40									96								
	Ticket Hours					111	121	68	60	97	45	81	520		89	360	86	168	82							
	04 STANDING																									
	TICKET HOURS																									
	TICKETS COMP																									
	TICKETS IN SHOP																									

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
47.	Repair	FC	0	16											RS											
3740	Hand rails	415	5												~~16~~											
48.	Repair	TT	0	44																						
3737	Valve	38	5	28									**			12	4									
49.	Repair &	BB	0	19																						
3289	Paint	45	5			4	15																			
50.	Replace	AS	0	24																						
4333	Lighting	205	5							24																
51.	Const.	BB	0	25																						
1097	Wall	28	5			18	7																			
52.	Replace	BA	0	16																						
3282	Coil	106	5		16																					
53.	Load		0	40													AR									
2077	Test	45	5														~~40~~									
54.	Replace		0	7																						
1137	Lights	19	5							7																
55.	Replace	AS	0	23																						
3291	door	515	5		8		3	12																		
56.	Repair	SBA	0	31																						
3226	doors	116	5			23	8	-																		
57.	Repair	TC	0	50																						
3288	doors	762	5				4								46											
58.	Replace 4	M	0	43																						
3313	Showers	130	5										32			11										
59.	Floor		0	37																						
1046	tile	1403	5	33		**	4.																			
60.	Remove		0	39																						
1099	door	1201	5			6	2	25								6										

JON	JOB DESCRIPTION	LOC	LC C	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
61.	Inst.		0	17																						
1101	outlets	935	5							17																
62.	Repair	SK	0	62																						
3276	Tower	5A	5			40	2				12					8										Cancel
63.	Replace	AS	0	45						RS	RS															
3374	Coil	202	5		8					18	15			4												
64.	Window		0	68											RS											
1007	Bars	126	5	35			**								~~33~~											
65.	Treat for		0	24																						
6026	termites	5857	5															24								
66.	Repair	TT	0	52												XX										
3735	water main	3222	5	28									**			28	**									
67.	Repair	BB	0	40																						
3201	reefers	7	5		40																					
68.	Paint	BB	0	25																						
3307	room	45	5				25																			
69.	Replace	AS	0	16																						
3655	A/comp	302	5														16									
70.	Replace	S	0	70												?										
1043	Booth	1047	5			20		9		16	2	4				15	4									
71.	Fab. 3		0	24																						
6595	doors	PP	5			19	5																			
72.	Inst.	LCH	0	10																						
1155	lights	4000	5							10																
73.	Inst.	FC	0	17										?												
3783	Valve	202	5											17												
74.	Inst.	BA	0	20																						
3784	valve	106	5											20												

JON	JOB DESCRIPTION	LOC	LC CC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	TV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
75.	Inst.	BB	0	26																						
3786	valve	9	5											26												
76.	Electric	501 526	0	66																						
5130	Repairs	535	5							58	8															
77.	PM	825	0	31																						
1818	A/Cs	855	5									31														
78.	Inst.	PT	0	40																						
1122	circuits	5	5							14						26										
79.	Remove		0	24																						
1084	Wall	115	5			18										6										
80.	Replace		0	37						AR				AR												
4105	Pumps	1004	5							12				25												
81.	Const.		0	23																						
0400	Partition	15	5			21	2																			
82.	Inst.		0	13																						
3672	A/comp	20	5							7			6													
83.	Window		0	27																						
1065	Bars	940	5				1								26											
84.	Replace	FC	0	40								AR														
3301	Bypass	260	5									~~40~~														
85.	Replace	S	0	37		?												?								
3576	Stringers	869	5			5												32								
86.	Repairs		0	53																						
3290	& Paint	203	5			23	11		14							5										May 17 Th
87.	Alter		0	64																						
3111	Piping	2615	5							16				45	3											

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
88.	Replace	AS	0	550																						
G168	A/C filters	TC	4	~~176~~ 196	40																					
89.	RM Refrig		0	50																						
G258	A/C Elect.	G640	4	~~16~~ 20	4																					
90.	PM Heat, refrig	FC	0	462																						
G058	A/C	BA BKs	4	~~168~~ 206	38																					
91.	PM A/C &		0	130																						
G108	Heat controls	MCAS	4	~~32~~ 40	8																					
92.	PM Batteries &		0	105																						
I258	Equipt.	MCAS	4	~~16~~ 20	4																					
93.	PM Air		0	154																						
G808	Comp.	MCB	4	60													12									
94.	RM Refrig.in		0	253																						
X308	1200,TT2455,AS414		4	~~80~~ 100	8							12														
95.	PM Elect	BA	0	160																						
G878	Etc.	BB RR	4	~~64~~ 80	16																					
96.	PM Elect in		0	160																						
G068	BKs	FC	4	~~48~~ 60	12																					
97.	RM roof fans		0	100																						
G648	BKs	FC	4	~~32~~ 40	8																					
98.	PM	M	0	48																						
G668	Refrig	324 424	4	~~16~~ 20	4																					
99.	PM	AS	0	48																						
G678	Refrig.	226 4012	4	~~16~~ 20	4																					
100.	PM	BB7	0	48																						
G698	Refrig	RR3	4	~~16~~ 20	4																					
101.	PM	FC320 420	0	75																						
G728	Refrig. BA103	540	4	~~24~~ 30	6																					

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
102.	PM & replace	RR	0	250																						
G178	filters	BB BKs	4	~~88~~ 108	20																					
103.	PM Heat & cooling		0	342																						
G848	Controls	TC	4	~~106~~ 30	24																					
104.	Spray horse		0	380														?								
L165	Barns		4	60														12								
105.	PM Plumb &	BB	0	540																						
G868	Steam	RR	4	~~208~~ 256	48																					
106.	RM Plumb &	FC	0	540																						
G798	Steam	BA	4	216 ~~176~~	40																					
107.	PM Elect		0	1375						106																
G018	BKs Etc		4	362 ~~298~~						~~64~~																
108.	PM		0	296																						
G688	Mess Halls		4	~~88~~ 110						22																
109.	PM Galley	Mess	0	200																						
L338	Equipt.	Hall	4	~~64~~ 80						16																
110.	Relamp St. &	MCB	0	1040																						
G028	Floodlights	AS	4	328 ~~264~~							64															
111.	PM	MCB	0	1320																						
G038	Elect Dist.	AS	4	510 ~~408~~							102															
112.	RM taxi &		0	200																						
G048	runway lights	AS	4								AR															
113.	PM & replace	HP	0	77																						
G208	Filters	89	4	~~24~~ 30								6														
114.	PM & repair		0	465																						
G218	Controls	MCB	4	180 ~~144~~								36														
115.	PM Mess Hall		0	288																						
G658	Refrig	MCB	4	~~88~~ 110								22														

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
116.	Spray		0	166																						
L175	Landfill		4	40														8								
117.	Replace		0	32																						
G228	filters	1101	4	~~8~~ 10								2														
118.	Pump, hose down	Dep	0	714																						
All	Grease traps	AS	4	~~256~~ 272									16													
119.	RM to liquid	MCB	0	288																						
G358 G368	fuel	AS	4	~~96~~ 120										24												
120.	PM & service	MCB	0	1140												~~40~~ ~~80~~ 80	~~24~~ ~~40~~ 40									
L308	Grease&oil separt.	AS	4	~~400~~ 464																						
121.	RM Bituminous		0	5540																						
F015	Rds & Sts		4													AR	AR									
122.	Haul sand &	water	0	2400																						
All	Cataylyst	plant	4	~~64~~ 80												16	AR									
123.	Haul		0	2712																						
L105	fly ash		4	~~880~~ 904												24										
124.	Pump	AS	0	4160																						
L115	waste oil	MCB	4	~~330~~ 370												~~40~~ 40	40									
125.	Operate sanitary		0	9600																						
L125	landfill		4													AR	AR									
126.	Assist shop 75		0	9264																						
L135	with garbage		4													AR										
127.	Pump out	MCB	0	793																						
G088 I298	Grease traps	AS	4	~~128~~ 192									64													
128.	Sweep		0	1774																						
L015 L155	Streets	AS	4	~~278~~ ~~246~~												32										
129.	Sweep sts &		0	472																						
L025	Parking lots	AS	4	~~148~~ ~~132~~													~~16~~ 8 8									

JON	JOB DESCRIPTION	LOC	LC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
130.	Spray		0	1400																						
L035	Mess Halls		4	~~840~~ 868														28								
131.	Spray for		0	13120																						
L055	Insects		4	~~4852~~ 5032														180								
132.	PM Grounds at	AS	0	3921																						
All	Qtrs	PP	4	~~3088~~ 3208															120							
133.	PM Plumb	CG	0	1260																						
G888	Steam	MCA	4	~~384~~ 480	96																					
134.	PM Plumb		0	200																						
G898	Steam	M Pt	4	~~64~~ 80	16																					
~~135.~~	~~PM~~		0	32																						
~~G618~~	~~Dryer Exh~~	AS	4	16	16																					
136.	PM Tele.	TC755	0	57																						
~~G238~~	~~Exc. Bldg.~~	M167 BB69	4	19	19																					
137.	PM Batt.		0	82																						
L268	Chargers	MCB	4	27						27																
138.	PM Gas		0	48																						
~~G378~~	Equipt.	BA	4											16												
139.	Clean Sewer	HP	0	48																						
F145	Lines	84	4	28									4													
			0	39																						
L278	PM BATT CHARGERS	FC	4	12	12																					
			0	72																						
T575	PM CONTROLS	TC	4	56								8														
			0	220																						
K078	PM HEATING	BDG	4	64									16	16												
4225		LOT	0	416																						
4235	SERVICE CRANES	203	4	112													16									

JON	JOB DESCRIPTION	LOC	LCC	TOTAL SCHED	ES 31	CA 41	PT 43	MAS 44	PL 45	EL 51	ED 52	RA 53	PLU 61	PI 62	MW 63	GK 71	HE 72	IV 76	LDS 78	M	T	W	T	F	TOT	REMARKS
			0	432																						
ALL	Spray Cafeterias	Sch.	4	266														14								
		BA	0	12																						
L245	Treat for Roaches	113	4	2														2								
		BA	0	12																						
L265	Treat for Roaches	115	4	2														2								
			0	192																						
L275	Treat for Roaches	BA	4	96														8								