

BUS OPERATOR ABSENTEEISM

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INTRODUCTION

The purpose of this study has been to analyze the scope and nature of absenteeism among the bus operator ranks and to develop recommendations which would help the Transportation Department in dealing with this problem.

The study was initiated in October, 1978 with the distribution of questionnaires to all Transportation divisions, assessing the number of incidents of absence from October 1, 1977 to September 30, 1978. More detailed follow-up was conducted at two divisions (#2 and #7) to profile operators with 9 or more instances in the past year.

In addition, extensive analysis of the Transportation Department's 3-5 reports, "Statements of Operating Personnel" was conducted from the period from October, 1976 to November, 1978 to determine relationships among manpower status, extra board requirements, shines, 1-day sick, 2 to 14-day sick, requests off and working days off.

This report very briefly describes the findings, conclusions and recommendations as a result of the study. The appendix contains many of the tables used throughout the analysis which may not be specifically cited in the report but which may be useful to anyone interested in a further level of detail.

CONCLUSIONS

1. Bus Operator absenteeism is widespread and severe. Short-term absenteeism (1 to 14 days) averages 6.3% from 1976 to the present (ranging from 5.6 to 6.8). If 15 to 30 day absenteeism is included, the rate has an average of 8.6%. An absence rate of 3.5% is considered by many industries to be acceptable.
2. The Transportation Department experienced a total of approximately 92,000 work days lost by operators from October, 1977 to September, 1978 as a result of absenteeism ranging from 1 to 30 days. This equates to approximately 350 man years lost.
3. Of the 92,000 work days lost, 20,440 days were lost due to 1-day sickness or 22%, equating to 79 man-years lost.
4. Bus Operator absenteeism appears to be caused by:
 - a. easy availability of scheduled overtime (long work days and biddable trippers)
 - b. easy availability of unscheduled overtime (work on days off due to manpower shortages)
 - c. little positive encouragement for coming to work (feeling they are needed, recognition by management)
 - d. little negative encouragement for coming to work (discipline policy for excessive absenteeism)
 - e. quality of supervision (follow-up on medical releases, personal contacts to operators' homes)
 - f. quality of pre-employment screening (very brief physical, little inquiry into past workers compensation and attendance records)
 - g. desire for more leisure time and the increase of two-income families.
5. Short-term absenteeism is strongly associated with manpower shortages and can usually be reduced by having adequate manpower.
6. Short-term absenteeism is strongly associated with increase use of operators on their regular days off. This may create a vicious cycle of more overtime and even more absenteeism.

7. Problem operators with 14 or more instances in the past 12 months frequently seem to have a miss-out problem.
 - a. Account for 6% of all operators and 19% of the instances of absence
 - b. Average 4 days per instance and about 17 instances per year
 - c. Earn an average of 40 pay hours per week rather than the average of 45 or 46 hours
 - d. Are otherwise satisfactory employees with regard to accidents and demerits.
8. Short-term absenteeism is somewhat linked with operators' rest days. Many operators seem to desire 3-day weekends.
9. Short-term absenteeism is strongly linked with Saturday and Sunday, regardless of regular rest days.
10. There is no correlation between poor attendance and low or high seniority.
11. There is a polarization in the patterns of sick pay usage by bus operators with few exceptions. Either they use all of their available sick pay allowance or they use none at all.
12. There are more instances of absence now than in 1975 but fewer than 1973.
13. Compared to 1973 or 1975, there are currently fewer problem operators but also fewer operators with good attendance (6 or fewer). The major shift has been for more operators to experience 7 to 13 instances per year.
14. The Transportation Department has no means of disciplining for excessive absenteeism, as a result of the arbitration.
15. Except for Division 5, action taken by managers has been limited to occasional counseling of problem operators.

FINDINGS

1. 4,090 operators accounted for 20,951 instances of absence, an average of over 5.1 instances per operator from October 1, 1977 to September 30, 1978.
2. The following distribution of instances and operators:

<u>No. of Instances</u>	<u>Operators No./%</u>	<u>Instances No./%</u>	<u>Avg. Instances Per Operator</u>
6 or less	2820/69%	7405/35%	2.6
7 to 13	1039/25%	9567/46%	9.2
14 or more	231/6 %	3979/19%	17.2

See Figures 1 & 2.

3. The following profile of operators at Division 2 and 7 with 9 or more instances of absence over last 12 months:

<u>Factor</u>	<u>9 to 13</u>		<u>14 or more</u>	
	<u>Div. 2</u>	<u>Div. 7</u>	<u>Div. 2</u>	<u>Div. 7</u>
Operators	49	67	18	40
% of Division's Operators	10.5%	17.3%	3.8%	10.3%
Days lost per instances	4.3	3.8	4.4	3.1
Miss Outs	3.8	3.7	4.8	5.4
Accidents-Unavoidable	1.5	1.8	1.5	1.9
Accidents-Avoidable	.5	.3	.2	.3
Demerits	-26	-35	-20	-35
Extra Board*	16%	43%	22%	53%
VCB Request	0	2	1	1
Seniority	1973	1972	1973	1973
Annualized Earnings	\$17,686	\$18,086	\$15,688	\$17,228
Annualized Pay Hours	2,227	2,278	1,976	2,170

*Division 2 average - 32%, Division 7 average - 35%.

4. Absence and the relationship with days off and with Saturday and Sunday:

Div. 2, August 1, 1978 to October 31, 1978

	<u>Sun.</u>	<u>Mon.</u>	<u>Tues.</u>	<u>Wed.</u>	<u>Thurs.</u>	<u>Fri.</u>	<u>Sat.</u>
Avg. who went sick	11.9	9.5	9.2	7.2	8.8	11.1	11.8
Avg. one-day sick	9.0	6.2	5.6	4.4	5.4	6.1	7.2
Avg. one-day sick linked with days off	3.1	4.0	1.4	1.2	1.6	3.5	4.3
Avg. one-day sick not linked with days off	5.9	2.2	4.2	3.2	3.8	2.6	2.9

See Figure 3.

5. During the period that the Transportation Department's discipline policy was in effect (November '77 - May '78) the number of one-day sick declined from about 55 per day systemwide to about 35, then soared over 70 per day after the decision was announced, before leveling off at about 65 per day. 2-14 day sick was not similarly affected during these periods (see Figures 4 and 5).
6. Short-term absenteeism (1 day and 2-14 day sick) is strongly negatively correlated with manpower status ($r = -0.74$), that is as the ratio of available operators to operators required increases, absenteeism decreases, and vice versa. This relationship is particularly strong ($r = -0.95$) in the year prior to the implementation of the new policy regarding excessive absenteeism. However, over all periods, the rate of change (slope) is relatively small. (See Figures 6 through 9.)

7. Both the average absenteeism rate and the average OCB/VCB rate is lower when the number of available operators meets or exceeds the number required, as shown below:

<u>Manpower Status (1)</u>	<u>Absentee Rate (2)</u>	<u>VCB/OCB Rate (3)</u>	<u>No. of Weeks</u>
0% & Above	5.60%	0.39%	48
Below 0%	6.76%	1.72%	63
(Overall Average)			
-0.17%	6.27%	1.15%	111

- (1) $\left[\frac{\text{Available Ops.} - \text{Required Ops.}}{\text{Required Ops.}} \right] \times 100$
Each % equals approximately 40 operators.
- (2) $\left[\frac{\text{One day} + \text{two to fourteen day sick}}{\text{Available Ops.}} \right] \times 100$
Each % equals approximately 40 operators.
- (3) $\left(\frac{\text{Operators working day(s) off}}{\text{Available Ops.}} \right) \times 100$
Each % equals approximately 40 operators.

8. A review of sick pay cards of the problem operators at Division 2 indicates a polarization in the patterns of sick pay usage. Of the 30 operators sampled, 14 of them used all of their sick pay allowance, 9 had not used any, and the remaining 7 fell somewhere in between.

RECOMMENDATIONS

Because of the multiplicity of factors causing absenteeism, no single recommendation can effectively deal with all facets of the problem. In order to address the varying aspects of operator absenteeism, the subsequent recommendations are proposed and are organized into three basic groups.

The first group includes those recommendations which can immediately strengthen the Transportation Department's control over absenteeism. These measures are uncomplicated, fully within management's prerogatives, and can be implemented with no significant cost.

The second group includes those recommendations which should receive top priority in contract negotiations with the UTU.

The third group includes those recommendations, some requiring contract changes, which are strongly supported by the findings but are such significant departures from past practice that they should receive further study.

A. MANAGEMENT PREROGATIVES

1. Greater Management Awareness and Action

It is recommended that the following efforts be initiated to increase management and employee awareness of the magnitude of the attendance problem:

- a) The Transportation Department should begin as soon as possible some method of tabulating on a daily basis the total days lost and number of instances as a result of absenteeism by division and per operator. Current record-keeping methods and manpower projection methods do not make note of actual days lost. The total days lost and instances of absence should be two indicators monitored very closely by division management on a weekly and monthly basis because they give a much more accurate report on how effective a division is in reducing absenteeism than the current manpower report.
- b) The Transportation Department should develop some means of coding absences recorded in the 3IR with a notation as to whether those absences occurred in connection with days off or weekends. A parenthetical D or W may be adequate.

- c) The Division Manager or Assistant Manager should daily monitor the Daily Event Sheet and make an effort to speak to as many of the operators as possible, who went sick on weekends or before or after their days off, upon their return to work. This form of contact should be friendly and informal and serve to show that the District missed them when they did not report for work.
- d) The Post Card Program at Division 5 should be implemented in all divisions. Currently at Division 5, a post card is sent to all operators who go sick on the day they go sick which states, in essence, that although they lost the pay for the day and the District was without their much-needed service, the Manager is more concerned about their well-being. The card further states that if the Manager can be of any assistance, they are invited to call or stop into his office. If the employee is out for three days or more, the manager then should follow up with a call to the employee if he has not heard from him or her. Again, this effort should be conducted in a friendly, informal manner with the overall message to the employee being that the District is concerned about his or her well-being.
- e) Each division manager should report to his superintendent on a weekly basis the status of all employees with absences over 7 days, and especially those employees in the 15 to 30 days, and the 30 days and over categories. To do this the manager or his assistant should attempt to reach these employees weekly to obtain information on their status.
- f) In the indoctrination of new students, the division manager should especially emphasize the importance of good attendance, the difficulties absenteeism causes especially in being able to grant requests off, and how it negatively impacts service.
- g) All students or newly qualified operators still in the probation period should be very closely monitored and whenever such an employee has any more than one absence in this period, friendly counseling should occur, to remind him or her that their absence was noted. Anymore than three absences in that 90 day period should be considered grounds for discharge.

- h) Division Managers and Assistant Managers should make maximum use of their ability to counsel employees under Code 15, a disciplinary code accepted by the Union, and so note it in the 3IR. This counseling should be conducted especially on those employees whose absences precede or follow days off or weekends and those with more than 14 absences in the previous 12 months. It should not be conducted in any threatening manner since the District is currently unable to take any further action. Rather, it should be conducted in a straight forward manner, impressing upon the employee how his or her absence negatively impacts the operation: requests off cannot be granted, service deteriorates, increases District costs, and employee dependability drops. At this time the point should be made to employees that the District needs healthy workers it can depend upon and again the offer of assistance should be made.
- i) The General Superintendent of Transportation should issue a memorandum to all division managers explaining the above procedures to be implemented. This memorandum should further state that the District continues to be concerned about absenteeism and, until a formal discipline policy is negotiated, they are expected to use all the resources in their control to reduce absence. Such a memo will help reduce ambiguity regarding the overall District attitude on absenteeism.

This set of recommendations is necessary because, aside from the requiring of doctor's releases after 14 instances, there is no department-wide effort being conducted using the tools and rights which management has retained.

These recommendations will address all aspects of the absenteeism problem--the long-term and short-term absenteeism. It will ensure that new students understand the District's attitude and will clarify for division managers what efforts the District is expecting them to make to reduce absenteeism. Another benefit of these efforts may be an improvement in operator morale if they are implemented properly. Such has been the experience at Division 5.

2. Manpower Status

It is recommended that the Transportation Department develop the manpower planning capabilities to maintain a bus operator staffing level which is equal to (\pm 0.5% or approximately \pm 20 operators) the projected system manpower requirement. Inherent in this recommendation is the assumption that these operators will be properly distributed among the divisions.

It is understood that this recommendation requires a coordinated effort by all departments. To maintain a staffing level within these tolerances, the Transportation Department must have sufficient lead time to effect timely adjustments in system manpower.

It is difficult to quantify and project the potential savings because of the absence of baseline data to reflect such a condition. Only 7 out of 111 weeks (6.3%) between October 17, 1976 and November 26, 1978 fall within the recommended parameters. If the parameters are expanded to \pm 1.0%, then only 13 of 111 weeks (11.7%) are captured.

However, the breakdown of the absenteeism and OCB/VCB rates for the weeks when manpower status is above or below 0, shown in the findings, substantiates the expectation of lower rates for periods of adequate manpower.

This recommendation should result in almost complete elimination of the need to work operators on their day(s) off and the resulting unscheduled overtime. Once this condition is achieved, there is no advantage to adding more operators to attempt to control absenteeism.

The elimination of the expectation to be able to compensate for an absence by working a day off should interrupt the vicious cycle leading to a spiral of increasing manpower shortages. This condition will eliminate this type of discretionary absence. In turn, the number of operators required for shine and sick coverage will decline, thereby improving the manpower status without altering the number of available operators.

The increased available manpower predictability should facilitate a smoother, more efficient division office operation with less dispatcher time allocated to filling scheduled service in an emergency OCB/VCB situation. This would improve dispatcher morale and the morale of those operators disturbed by OCB's. More importantly, this recommendation will reduce, if not eliminate, service disruptions due to manpower shortages.

3. Maximizing the Medical Aspects

It is recommended that the following measures be taken to approach the problem from the medical perspective.

- a) The Employment Department should intensify the pre-employment screening in three areas. One is the implementation of back x-rays as a part of the physical. It is understood that efforts are being made in this area. The other is a more thorough review of references from previous employment striving to eliminate those candidates who had a history of on the job injuries, non-occupational injuries, or excessive absenteeism. Thirdly, the Employment Office should consider expanding the employment application to allow for more medical history to be given and for questions on the employees attendance record at previous employment.

The pre-employment physical and x-ray examination would not interfere with current federal regulations relative to handicap hiring practices. The examination reflects the minimum medical requirements for a Class II license as specified under Section 12804(a) of the Vehicle Code. An organization is not compelled to hire a person who is deemed to be incapable of performing the job requirements for which he is applying. Disqualification would be based on the presence of physical, mental or organic defects which may affect the applicant's ability to operate a motor vehicle safely, and not solely on his handicapped condition.

- b) Division Managers should attempt to verify as much as possible information given on doctor's releases, calling and speaking to the doctor directly, requesting clarification of vague orders or releases. This is being done to some extent but not as a major effort. The Insurance Department is currently revising the "Release to Duty" and "Request for Sick Leave" forms to require more information from doctors and employees before granting benefits. These revisions should be of great assistance to managers.
- c) Division Managers should make maximum use of the Visiting Nurse program.
- d) Explore a "Limited Duty" return-to-work program for operators.

As with the previous recommendation, it is impossible to know how much absenteeism would be reduced. However, these are relatively inexpensive efforts which would help eliminate the hiring of medical or absenteeism risks and reduce the misuse of doctor's releases and the falsification of sick reports.

B. Items for Negotiations

1. Attendance Policy

It is recommended that contract changes be negotiated to allow for the disciplining of operators with excessive absenteeism. The changes negotiated should permit the District to initiate disciplinary action against employees whose records demonstrate:

6 or more instances of absence in a floating 6-month period; or

3 or more instances of absence with a total work time lost of less than 48 hours in a floating 6-month period.

This recommendation is supported by the data on the employees with 14 or more instances in the past 12 months. These employees average, District-wide, 17 instances a year with a time lost per instance averaging 4 days. These employees account for 6% of all operators and 20% of the instances of absence. If these operators' performance was improved to equal the average performance (4.5 instances per year) of the remaining operators, total instance of absence would be reduced by 10%.

It must be remembered, however, that an attendance discipline policy is negative form of encouragement to come to work. It can only really address the most abusive levels of absenteeism and may act as some deterrent to those approaching the abusive level. Other recommendations, particularly those under Management Prerogatives, are far more important actions which Management should take to positively encourage employees to come to work.

2. Overtime for Working Days Off

It is recommended that the contract be changed to prohibit the payment of overtime when working days off if the operator has not worked the previous five workdays.

This recommendation is supported by the economics of the current contract which allows for the possibility of an employee coming out ahead by going sick on his or her regular work days and working at time and a half on the days off. Currently an employee can earn the equivalent of three days pay for working his or her two days off.

It is also supported by the data which shows that absenteeism increases when manpower shortages require the use of operators on their days off.

Because of the complexity of record keeping, it was not possible to detect how frequently this occurs. It was learned that the problem operators (14 or more instances) were not taking advantage of this contract provision because it appeared they were content to earn less pay, and to average 40 hours pay per week. However, this change would probably have some affect on deterring to some degree the use of this provision by all remaining operators.

Admittedly, the proposed change has its weaknesses because there still would be no deterrent to working seven days in the first week and then only three in the next week, still permitting him or her to come out ahead. However, with the implementation of other recommendations on reducing the availability of VCB's and OCB's, the two changes will together help to reduce the incentives for absenteeism.

3. No Additional Sick Pay Benefits

It is recommended that the District not grant any additional sick pay benefits in the upcoming negotiations.

Preliminary data indicates that many employees view sick pay as a benefit to be used and not saved. Any additional sick pay will only encourage greater absenteeism.

C. ITEMS REQUIRING FURTHER STUDY

1. Sick Time Provisions

It is recommended that the District consider negotiating revisions to the sick time provisions so that it can no longer be perceived as a benefit to be utilized at an operator's convenience but rather as a contingency fund to be tapped only to protect them from a loss of income resulting from illness or accident.

The provision (Article 47) now begins computing sick time after the first full workday absence, unless the absence extends beyond ten or more consecutive workdays. It also allows for the accumulation of unused sick time up to a maximum period of 1160 hours.

It is reported that many of the operators who go sick for one day at a time are grateful that this time lost does not diminish their reserve of sick time. Their reasoning is that they can either budget for a small amount of lost pay time or compensate for it through the availability of scheduled and unscheduled overtime. And, at the same time, they maintain a reserve of sick time in the effect that they should suffer from an unanticipated illness.

Other operators consider the sick time benefit as something owed to the operators instead of a contingency fund to be tapped only to protect them from a loss of income during a period of illness. Presently, the only way of realizing this perceived benefit is to go sick for 2 or more days at a time. This type of absence, even though specifically forbidden, contributes to the absenteeism problem, adds to the manpower requirements and to disruption at the division.

A review of the sick time cards of the problem operators at Division 2 suggests that these operators fall into one of the two categories. Almost without exception, either those operators have exhausted their sick time allowance or their allowance is virtually untapped. In the latter case, either the operators did not qualify because of a one-day illness or they chose not to claim the time after the first day, electing instead to preserve their accumulated allowance.

The following set of alternative approaches addresses all or part of the sick time dichotomy. One could be selected at the onset of negotiations with realization that others may be proposed later.

- o Automatic payment of sick time computed from the first day of absence
- o Payment of sick time only in the event of an extended absence of 5 or more days, again computed from the first day of absence
- o Setting aside a major portion of the sick time allowance to be available only in the event hospitalization and after the smaller portion has been exhausted for either extended or incidental illness
- o Annual payment, or the option of annual payment, of unused sick time.

It is possible that at least some of the cost of the payment of sick time under the proposed changes can be recovered by discouraging either type of absence, thus reducing the number of operators required by reducing the number required for sick and shine coverage.

2. Scheduling Changes

It is recommended the District consider revising the frameworks within which work runs are cut to include:

- a) Scheduling more work assignments as close as possible to 8 pay hours

- b) Creating four-day work week runs (40 hours per week, 10-hour days)
- c) Hiring part-time operators to work biddable and non-biddable trippers.

Conventionally in the past, regular work runs scheduled for more than 8 pay hours were thought to reduce manpower costs because with the cost of hiring new employees, overtime appeared to be cheaper. However, it is then possible for operators to meet or exceed the usual standard of 40 pay hours per week used in most industries in only four working days. The research suggests that some problem operators are satisfied with 40 pay hours per week and have the ability to frequently miss a day or two of work without adversely affecting their income.

This condition is costly to the District because it increases the shine and sick coverage requirements. This raises the question of whether the cost of additional manpower to cover absenteeism may be greater than the cost of additional manpower to fill shorter runs and 4-day work runs. This trade-off needs to be seriously evaluated.

It is understandable that the availability of more than 40 hours per week is one of the most attractive features of the job to many operators: it allows them to maintain a higher standard of living and gives them flexibility to take occasional time off without pay, without affecting their sick leave reserve and without adversely affecting their income. While many operators perform quite satisfactorily year after year averaging 45 hours per week, the research suggests the District may be absorbing certain hidden costs in absenteeism from those employees who do not wish to work that many hours per week. Some hidden costs may be reduced if more operators had the opportunity to work a 40-hour week.

As a related issue for negotiations, the negotiating team should consider using the issue of cutting back a significant portion of operator runs to eight-hour days if the union does not accept an absenteeism policy.

The District must also consider the possibility that the longer work hours expected of operators may take its toll in the form of increased legitimate illness, fatigue, chronic health problems and job dissatisfaction.

Additional justification for the four-day work week is the desire for more leisure time. Many operators, because of the economics of the situation as discussed earlier, call in sick one day in connection with their days off. A certain number of operators would probably very much enjoy a regular 4-day work week. This is a trend experienced in all industries, particularly with the higher frequency of households with two incomes.

The 4-day work week would require a contract change while the 40-hour work run concept is within management's prerogatives.

The unique advantage of the 4-day work week is that it would enable the District to negotiate changes in spread time provisions such as quaranteeing 10 hours pay within 12 hours, allowing the District to better manage the spread between peaks. It would be possible to reduce the number of pay hours for the same level of vehicle hours.

Part-time operators are probably the most significant means of allowing the District to more efficiently adjust to the wide variance in peak to base service but would also help to reduce the extra work which is usually performed at overtime rates, biddable trippers and some non-biddable trippers. The reduction in available overtime would then act as a disincentive to those operators who can afford a high level of absenteeism because their pay hours are in excess of 40 hours per week.

It is envisioned that these three recommendations, shorter work runs, four-day week, part-time operators, all be considered together and seriously discussed among District staff. Serious consideration should be given to using the RUCUS program to evaluate the cost-effectiveness of applying these principles to the District's operation.

F I G U R E S

DISTRIBUTION OF ABSENCES

No. of Instances per Operator	No. of Operators	% of Operators	Cumulative		Total Instances	% of Instances	Cumulative	
0	557	13.6	13.6	100.0	0	0	0	100.0
1	470	11.5	25.1	86.4	470	2.2	2.2	100.0
2	377	9.2	34.3	74.9	754	3.6	5.8	97.8
3	391	9.6	43.9	65.7	1173	5.6	11.4	94.2
4	387	9.5	53.3	56.1	1548	7.4	18.8	88.6
5	368	9.0	62.3	46.7	1840	8.8	27.6	81.2
6	270	6.6	68.9	37.7	1620	7.7	35.3	72.4
7	265	6.5	75.4	31.1	1855	8.9	44.2	64.7
8	198	4.8	80.3	24.6	1584	7.6	51.8	55.8
9	150	3.7	83.9	19.7	1350	6.4	58.2	48.2
10	140	3.4	87.4	16.1	1400	6.7	64.9	41.8
11	126	3.1	90.4	12.6	1386	6.6	71.5	35.1
12	88	2.2	92.6	9.6	1056	5.0	76.5	28.5
13	72	1.8	94.4	7.4	936	4.5	81.0	23.5
14	56	1.4	95.7	5.6	784	3.7	84.8	19.0
15	52	1.3	97.0	4.3	780	3.7	88.5	15.2
16	27	0.7	97.7	3.0	432	2.1	90.5	11.5
17	20	0.5	98.1	2.3	340	1.6	92.2	9.5
18	17	0.4	98.6	1.9	306	1.5	93.6	7.8
19	11	0.3	98.8	1.4	209	1.0	94.6	6.4
20	14	0.3	99.2	1.2	280	1.3	96.0	5.4
21	9	0.2	99.4	0.8	189	0.9	96.9	4.0
22	6	0.1	99.5	0.6	132	0.6	97.5	3.1
23	2	0.0	99.6	0.5	46	0.2	97.7	2.5
24	2	0.0	99.6	0.4	48	0.2	97.9	2.3
25	3	0.1	99.7	0.4	75	0.4	98.3	2.1
26	1	0.0	99.7	0.3	26	0.1	98.4	1.7
27	1	0.0	99.8	0.3	27	0.1	98.5	1.6
28	5	0.1	99.9	0.2	140	0.7	99.2	1.5
29	1	0.0	99.9	0.1	29	0.1	99.4	0.8
30	1	0.0	99.9	0.1	30	0.1	99.5	0.6
32	1	0.0	100.0	0.1	32	0.2	99.6	0.5
36	1	0.0	100.0	0.0	36	0.2	99.8	0.4
38	1	0.0	100.00	0.0	38	0.2	100.0	0.2

4,090

20,951

FIGURE 2

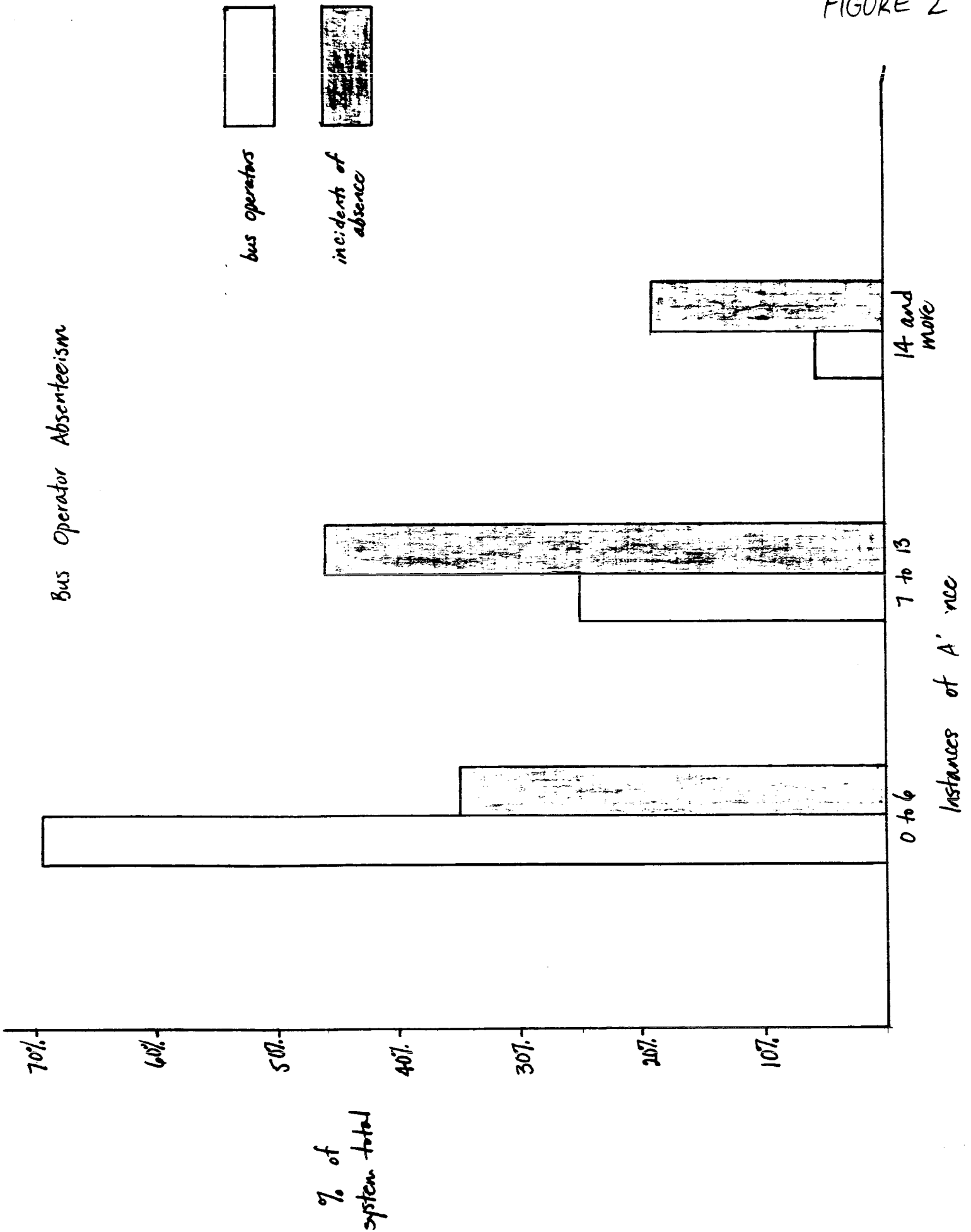
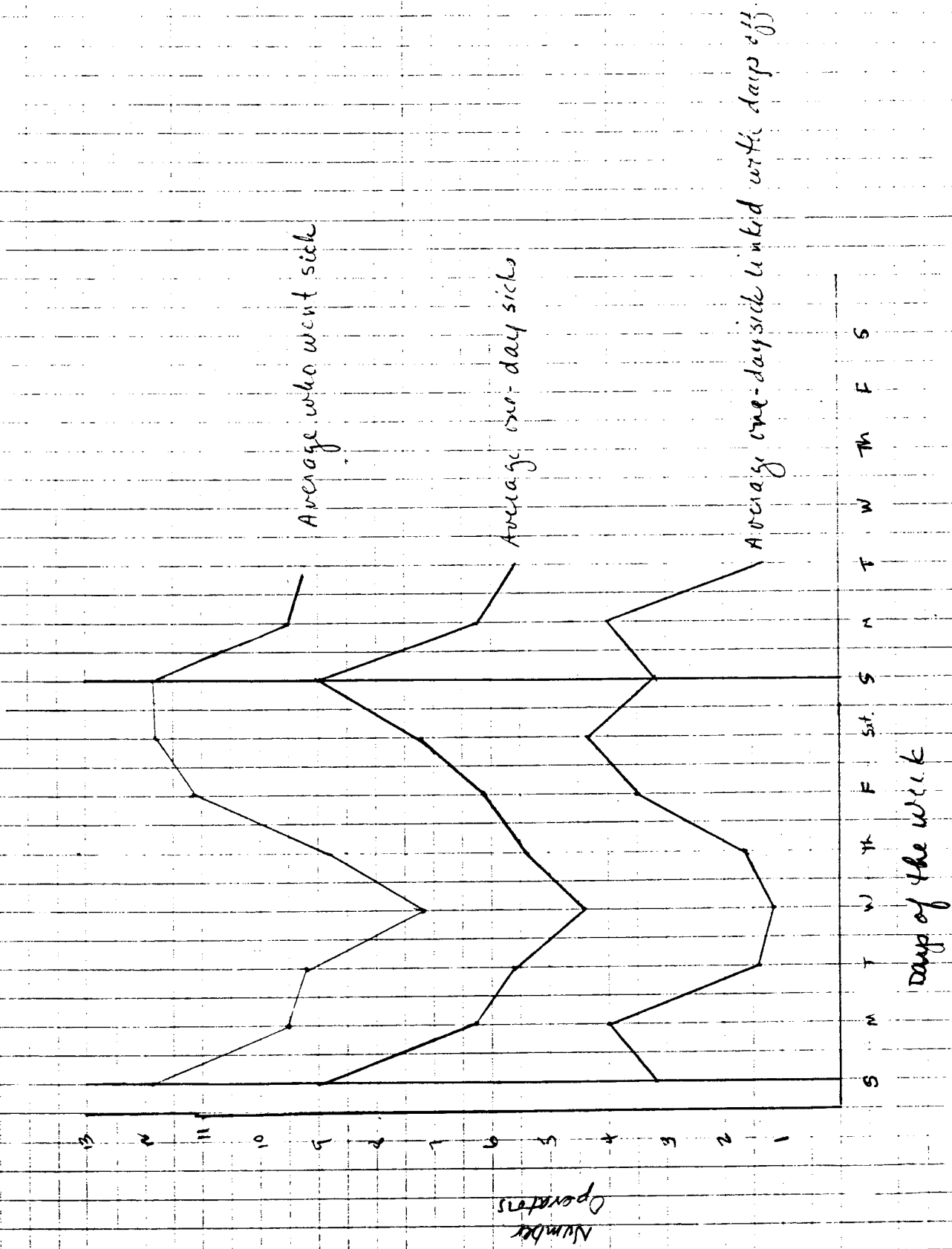


FIGURE 3



Div. 2 Absence Averages (Aug. 1, 1978 to Oct. 31, 1978)

TIME VS MANPOWER - SCHEDULE WORKING DAYS (SEE SCHEDULE SICK
 11/21/76 - 10/22/78

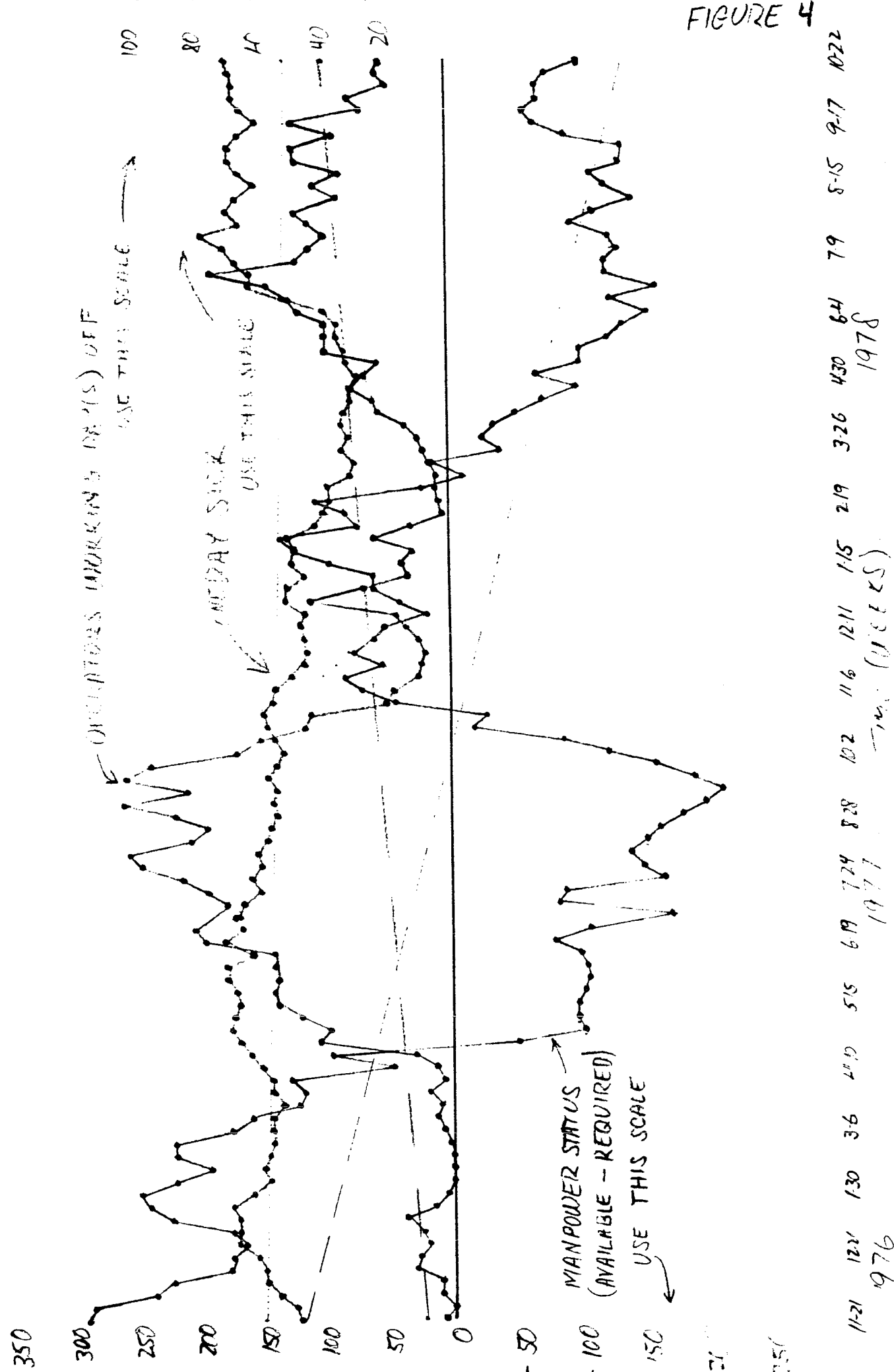


FIGURE 4

11-21 12-21 1-30 2-6 3-6 4-10 5-5 6-19 7-24 8-28 10-2 11-6 12-11 1-15 2-19 3-26 4-30 6-4 7-9 8-15 9-17 10-22
 1976 1977 1978
 (WEEKS)

OF OPER.
 2-14 DAY SICK
 TIME VS 2-14 DAY SICK & 15-30 DAY SICK
 11/21/76 - 10/22/78

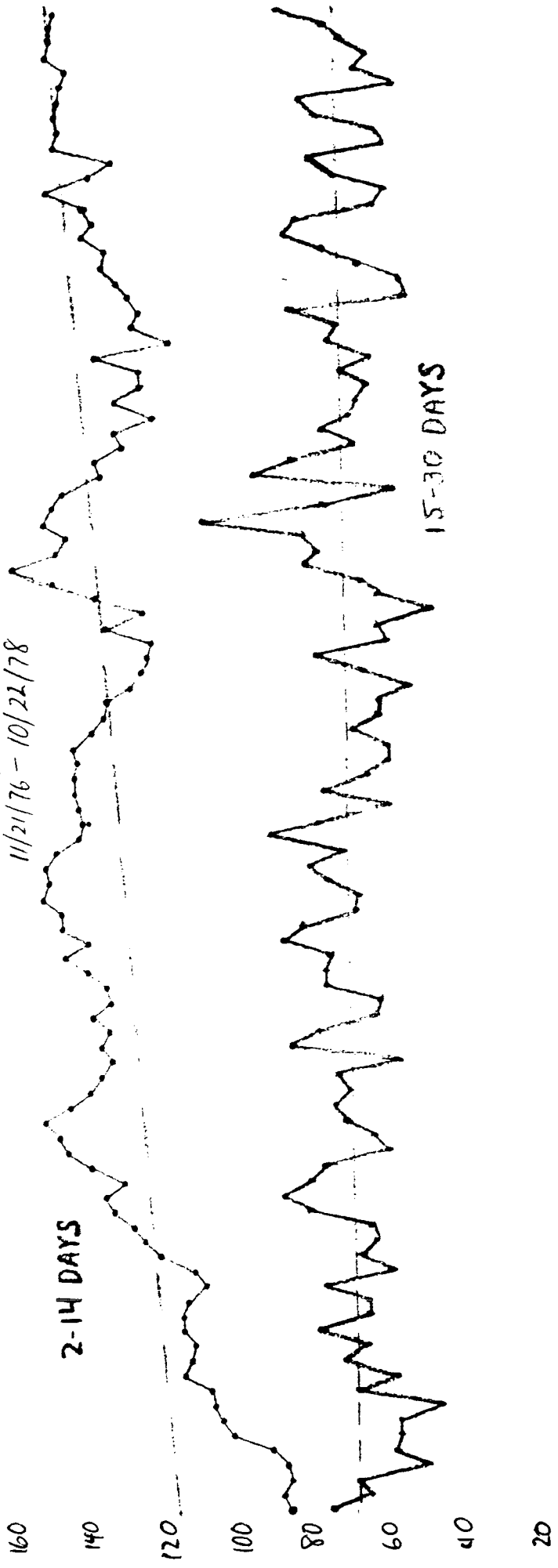


FIGURE 5

11-21 12-26 1-30 3-6 4-10 5-15 6-19 7-24 8-28 10-2 11-6 12-11 1-15 2-19 3-26 4-30 6-4 7-9 8-15 9-17 10-22
 1976 1977 1978

systemwide

Manpower Status [Available - Required = Required] vs.

Disentitlement [1 Day + 2-14 (auktion) = Available]

10-17-76 — 11-23-77 (54)	$r = -0.945441645$ $r^2 = 0.893959903$ $m = -0.167546256$ $b = 4.323858766$	$\bar{y} = 4.220433086$ $SD = 0.682920445$ $\bar{x} = 0.517295918$ $SD = 3.85311459$
10-17-76 — 5-21-78 74	$r = -0.769179081$ $r^2 = 0.591636458$ $m = -0.13556338$ $b = 4.330372072$	$\bar{y} = 4.256563327$ $SD = 0.57721016$ $\bar{x} = 0.542246325$ $SD = 3.275658772$
10-17-76 — 11-26-78 114	$r = -0.73829095$ $r^2 = 0.545073527$ $m = -0.154629482$ $b = 4.452066696$	$\bar{y} = 4.47389336$ $SD = 0.6053451$ $\bar{x} = -0.17310195$ $SD = 3.7743911$
11-30-77 — 5-21-78 27	$r = -0.76322784$ $r^2 = 0.582516737$ $m = 0.12257761$ $b = 4.24765802$	$\bar{y} = 4.297362536$ $SD = 0.30074905$ $\bar{x} = 0.09757657$ $SD = 1.830595017$
5-28-78 — 11-26-78 27	$r = 0.293570978$ $r^2 = 0.086183919$ $m = 0.089723805$ $b = 5.384621$	$\bar{y} = 5.169406797$ $SD = 0.435634$ $\bar{x} = -2.398629915$ $SD = 1.287716384$

FIGURE 7

MANPOWER STATUS WORKING REQUIRED
11/20/76 - 10/22/78

$r = -0.88$
 $r^2 = 0.77$
 $M = -0.18$
 $b = 31$

OF OPERATORS
WORKING DAY(S) OFF

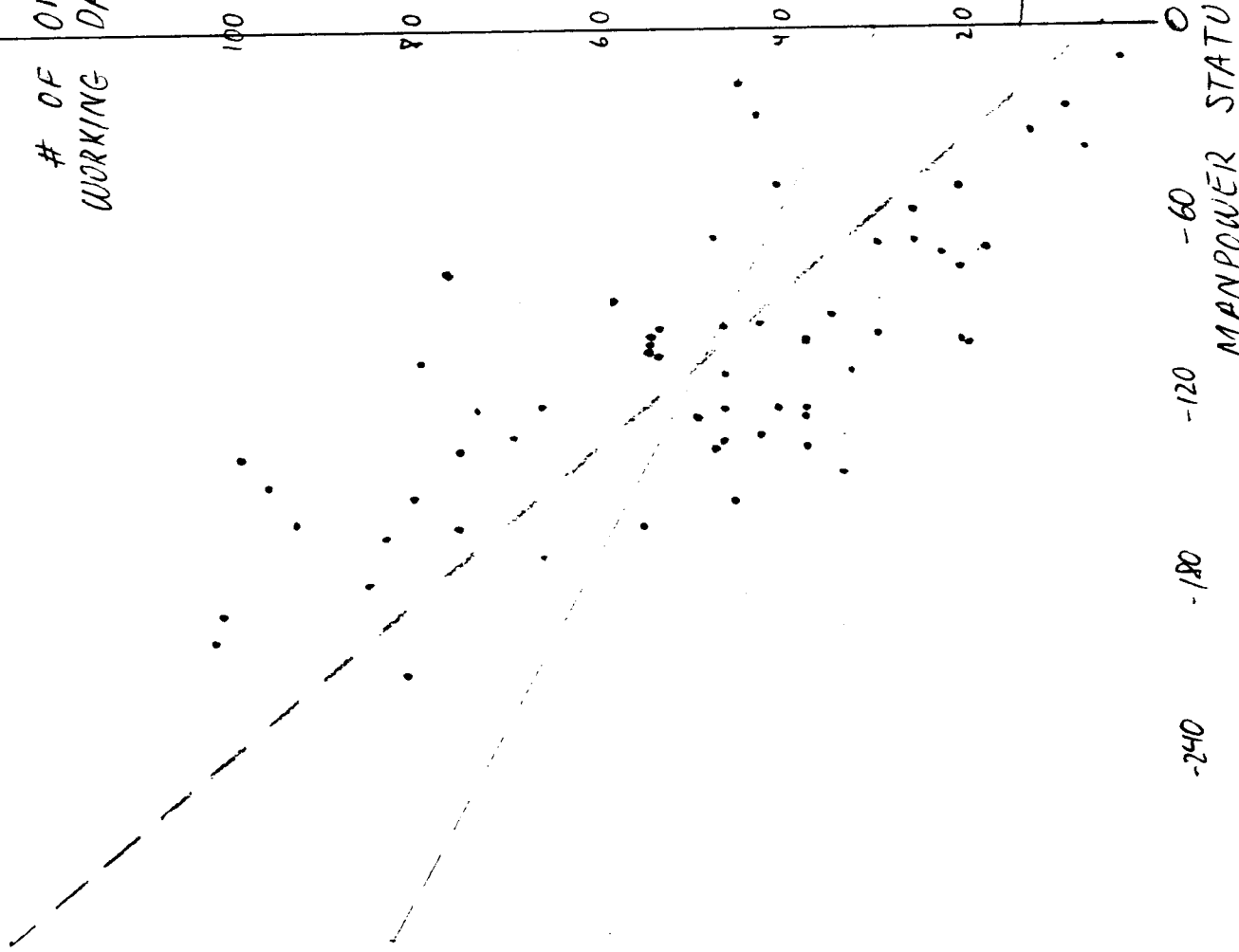


FIGURE 8

MANPOWER STATUS VS ONE DAY SICK
11/21/76 - 10/12/78

$r = -0.10$
 $r^2 = 0.01$
 $m = -0.01$
 $b = 56$

OF OPERATORS
ONE DAY SICK

80
60
40
20

240

180

120

60

-60

-120

-180

-240

MANPOWER STATUS (AVAILABLE - REQUIRED)

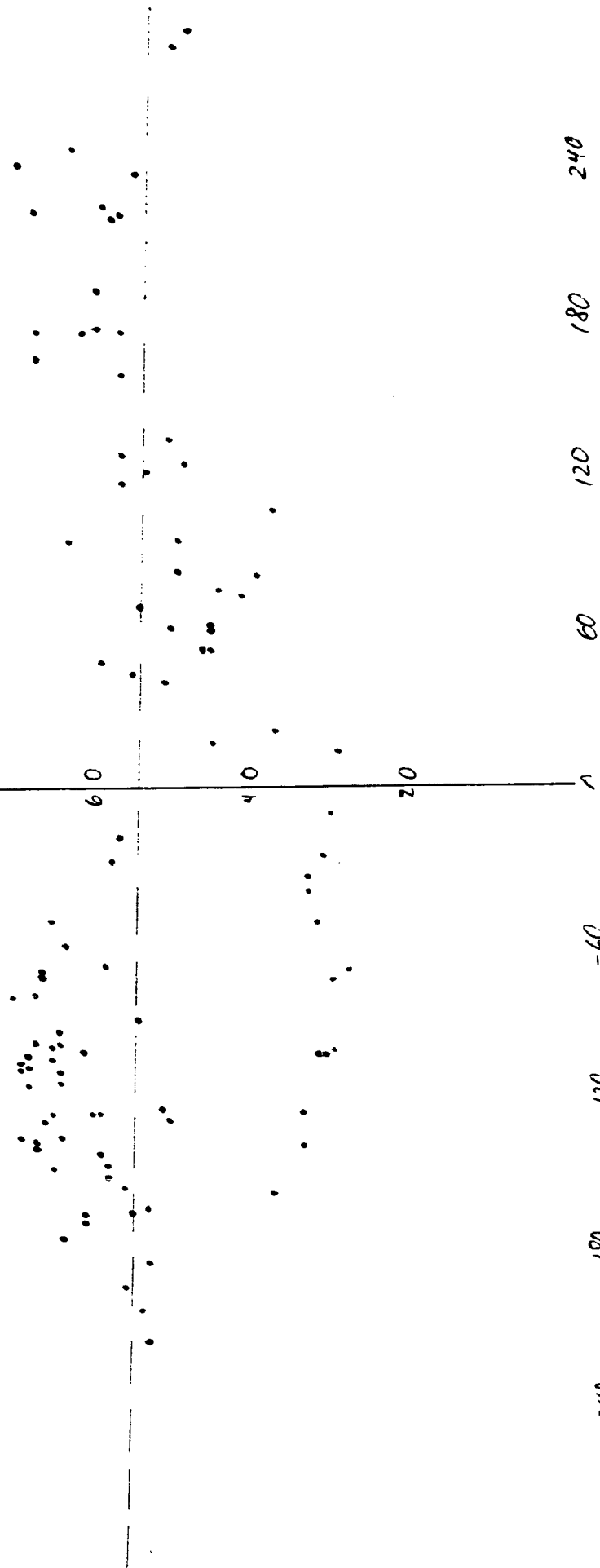


FIGURE 9

MANPOWER STATUS VS. ABSENTEEISM (10-17-76 - 11-26-78)

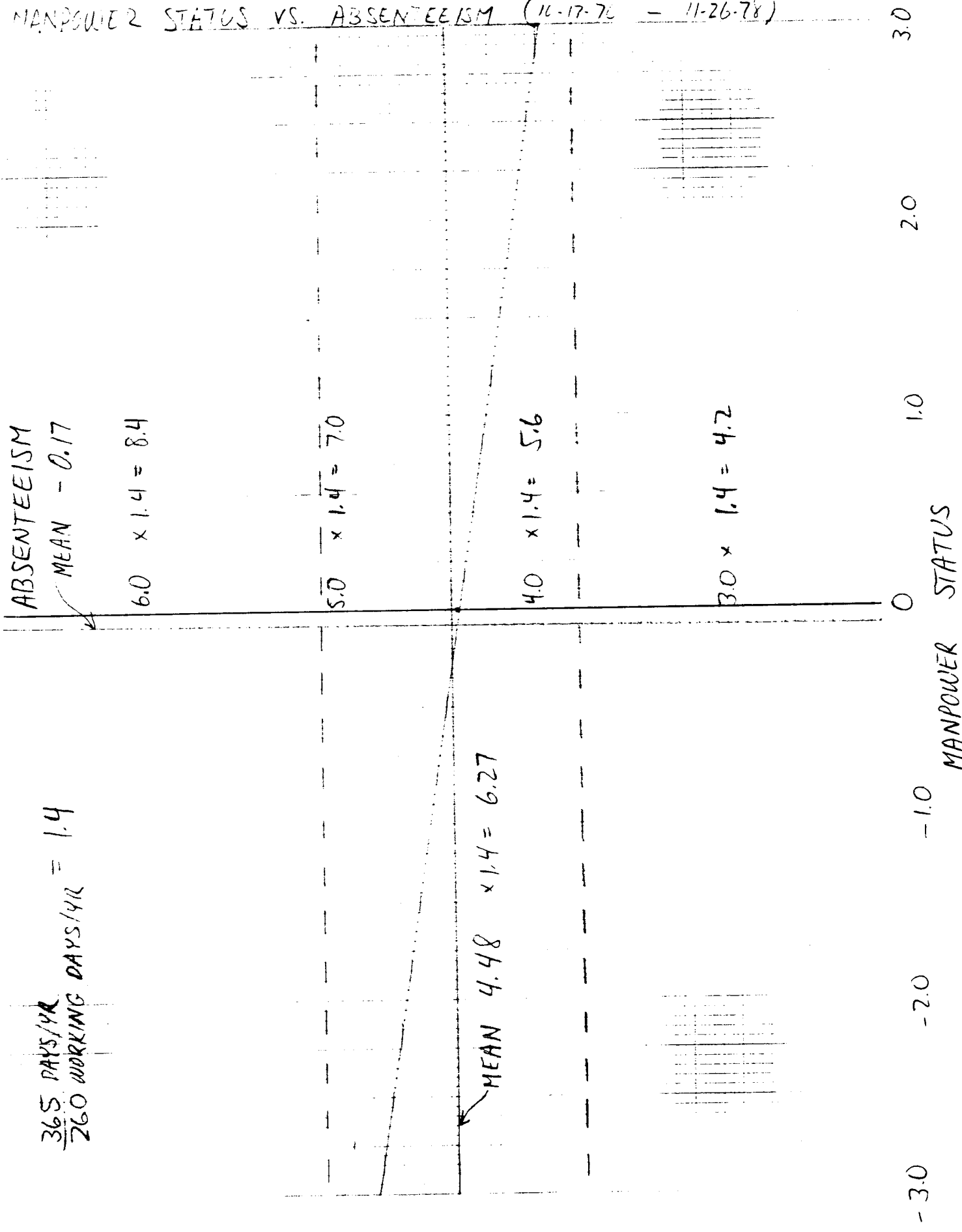
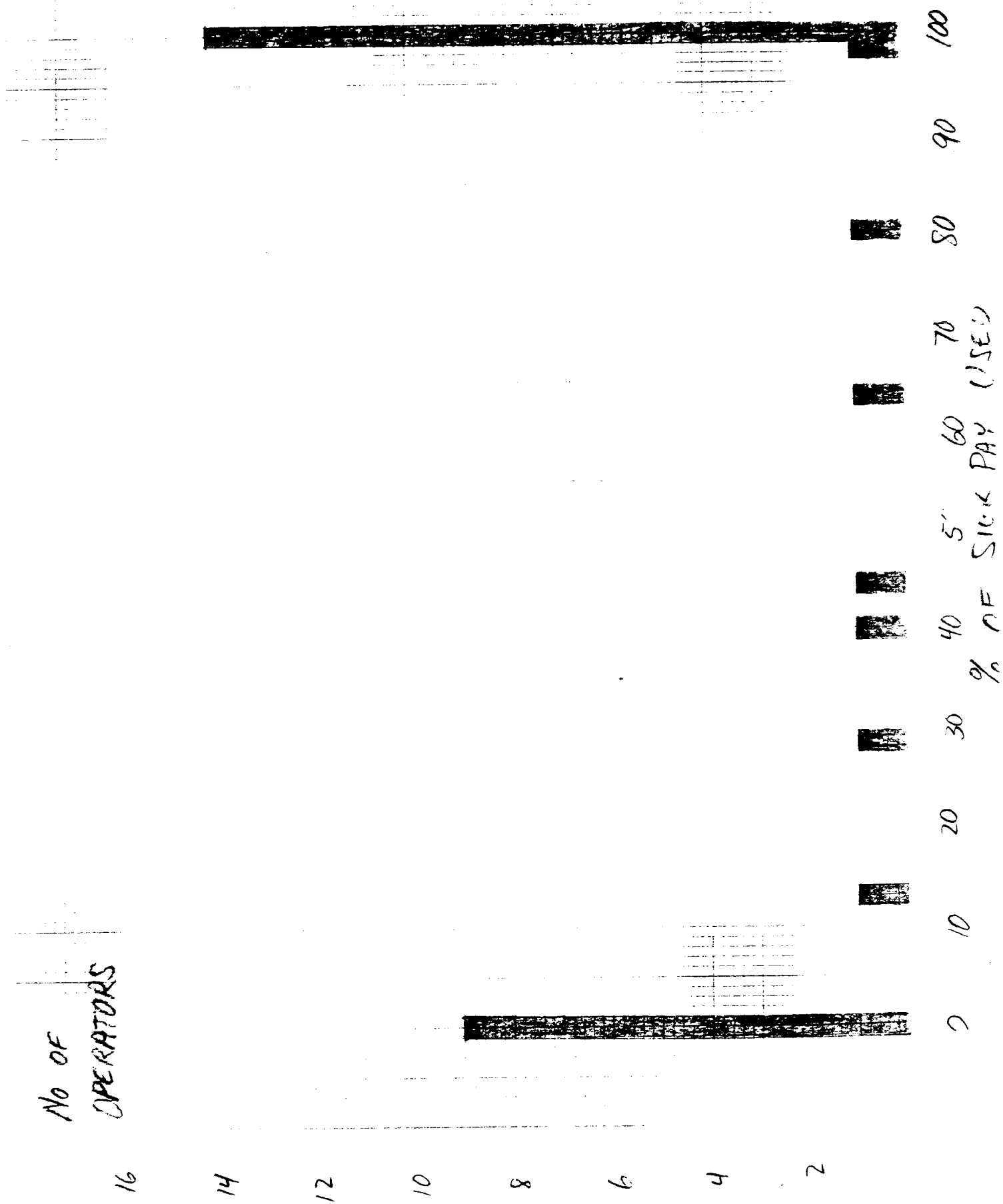


FIGURE 10

SICK PAY USAGE



A P P E N D I C E S

APPENDIX A

A

RTD 37-21
REV. 8/69

% of ops.
req'd.

SYSTEM TOTALS - 3-5 REPORT

(35)

A	B	C	D	E	F	G	H	I	J	K
	2-14 absence	One Day absence	#Shines	#Reg.Runs	Ops. Req'd.	Ops. Avail.	Op. status	Worked Days-off		Extra Ops Req'd.
1-17-76	114	64	182	3224	4488	4524	+36	300	43	1264
1-24	112	66	185	3224	4477	4587	+112	192	27	1257
1-31	107	60	200	3223	4435	4622	+187	180	26	1212
1-7	99	62	213	3193	4378	4640	+262	120	17	1155
1-14	85	56	215	3186	4371	4655	+284	457	5	1115
1-21	85	48	200	3186	4379	4670	+291	24	3	1117
1-28	87	50	215	3186	4385	4665	+285	1	1	1114
1-5	85	55	227	3186	4447	4683	+236	31	4	1211
1-12	86	59	236	3187	4456	4677	+223	28	4	1257
1-19	90	60	254	3187	4486	4665	+177	85	12	1111
1-26	100	62	254	3166	4410	4665	+175	80	11	1124
1-3-77	103	68	255	3166	4564	4669	+165	55	8	1111
1-9-77	105	65	256	3166	4502	4677	+175	67	10	1111
1-16	106	68	257	3141	4451	4673	+222	103	15	1111
1-23	113	70	266	3187	4424	4664	+240	39	6	1111
1-30	111	63	252	3198	4413	4659	+246	16	2	1111
2-6	110	58	245	3201	4437	4656	+219	2	3	1111
2-13	113	60	250	3199	4453	4641	+188	0	0	1111
2-20	113	58	249	3201	4422	4641	+219	0	0	1111
2-27	112	57	247	3184	4394	4614	+220	5	1	1111
3-6	107	57	252	3181	4431	4606	+75	22	3	1111
3-13	110	57	251	3181	4431	4592	+159	37	5	1111
3-20	119	54	254	3180	4456	4577	+121	25	4	1111
3-27	123	57	255	3142	4455	4572	+117	54	8	1111
4-3	126	57	247	3138	4444	4572	+128	22	5	1111
4-10	131	60	266	3140	4512	4560	+48	35	5	1111
4-17	133	64	269	3104	4454	4549	-95	81	12	1111
4-24	128	67	267	3104	4435	4383	-52	297	42	1111
5-1	137	70	261	3102	4435	4331	-104	275	39	1111
5-8	143	69	251	3101	4415	4316	-99	338	43	1111
5-15	145	67	246	3103	4414	4314	-100	382	55	1111
5-22	149	68	230	3103	4402	4297	-105	395	56	1111
5-29	142	71	228	3103	4388	4279	-109	383	55	1111
6-5	137	71	228	3103	4365	4259	-107	392	56	1262
6-12	124	69	218	3103	4353	4251	-102	394	55	1251
6-19	131	72	238	3095	4329	4248	-81	549	70	1254

	2-14	Chs-day	Churs	Reg. num	Cps Regd.	Avail.		Worked day-off		Eq. 2 1000
2-20	134	66	230	3045	4348	4235	110	564	81	1300
2-5	132	67	222	3036	4357	4183	-174	478	68	1300
2-12	136	66	221	3014	4317	4182	-135	496	71	
2-17	131	61	220	3012	4324	4153	-141	531	77	
2-24	132	63	217	3008	4319	4151	-128	595	85	1310
2-29	137	60	221	2945	4258	4107	-151	680	98	1315
3-6	143	61	216	2942	4255	4113	-142	711	102	1318
3-13	137	58	210	2945	4243	4081	-155	577	82	1291
3-20	144	57	204	2944	4252	4087	-155	577	77	1301
3-27	144	55	201	2944	4240	4056	-157	611	87	1302
4-3	145	56	195	2944	4251	4049	-202	727	104	1307
4-10	147	55	202	2944	4255	4041	-214	577	83	
4-17	148	58	204	2944	4252	4039	-193	709	103	
4-24	145	55	190	2917	4217	4044	-163	651	95	1291
4-30	139	58	194	2917	4172	4042	-125	511	63	1291
5-7	145	56	201	2927	4169	4037	-152	423	60	1291
5-14	139	58	215	2917	4177	4037	-197	527	46	1294
5-21	140	59	211	2914	4144	4034	-217	517	44	1294
5-28	141	56	211	2917	4073	4034	+41	141	20	1294
6-4	139	55	213	2833	4033	4032	+69	127	18	1294
6-11	141	51	205	2811	4044	4027	+53	73	0	1294
6-18	137	46	187	2812	4061	4114	+53	51	9	1294
6-25	138	45	187	2812	4062	4117	+71	55	8	1294
7-2	137	44	186	2814	4031	4037	+66	72	10	1294
7-9	125	41	185	2814	4031	4037	+52	95	14	1294
7-16	121	40	183	2804	4051	4037	+17	111	17	1294
7-23	120	52	181	2771	4021	4037	+16	91	44	1294
7-30	119	51	181	2765	3951	4041	+11	112	27	1294
8-6	131	46	170	2761	3932	4045	+61	91	13	1294
8-13	121	50	176	2761	3941	4044	+11	103	15	1187
8-20	134	49	186	2761	3921	4044	+124	87	12	1187
8-27	145	51	189	2761	3958	4042	+134	165	24	1187
9-3	156	43	183	2761	3959	4032	+73	91	12	1187
9-10	144	40	187	2765	3957	4031	+81	91	2	1187
9-17	141	38	185	2765	3955	4041	+100	21	3	1187
9-24	147	38	203	2777	4015	4030	+21	25	4	1236

	3-14	Days	above	req. num	Op. reqd	Op. Actual		Work d day //		
3-5	145	31	210	2779	4026	4005	-21	25	4	1247
3-12	142	30	209	2779	3990	4003	+13	40	6	1211
3-19	132	34	220	2777	4043	4003	-40	57		1200
3-25	133	32	219	2774	4053	4004	-27	63	10	1204
4-2	120	34	201	2774	4023	3955	-35	101	15	1249
4-9	121	33	193	2777	4036	3975	-53	151	22	1259
4-16	111	31	201	2777	4021	3946	-75	165	24	1244
4-23	125	31	205	2777	4044	3935	-102	216	31	1230
4-30	121	29	201	2777	4001	3930	-71	191	27	1224
5-7	121	32	205	2777	4016	3912	-104	152	22	1231
5-14	123	33	203	2777	4016	3912	-104	276		1239
5-21	111	35	199	2777	4027	3901	-126	275		1250
5-28	123	35	196	2777	4020	3881	-139	275	35	1240
6-4	121	39	196	2777	4021	3864	-157	332	47	1240
6-11	124	32	184	2777	3996	3867	-129	357	51	1219
6-18	127	63	211	2777	4032	3867	-165	399	57	1255
6-25	131	62	204	2702	4006	3880	-126	524	75	1304
7-2	130	67	207	2704	4005	3879	-126	334	48	1301
7-9	136	71	226	2695	4018	3883	-135	305	44	1301
7-16	133	78	241	2695	4025	3896	-129	275		1300
7-23	136	66	232	2681	3999	3901	-98	309		1300
7-30	145	70	237	2681	4002	3887	-115	335	48	1301
8-6	134	67	232	2681	4028	3881	-147	245	35	1307
8-13	125	61	225	2681	4028	3897	-126	296		1342
8-20	143	66	227	2682	4003	3894	-114	235	34	1320
8-27	142	69	226	2685	4029	3883	-137	336	40	1335
9-3	143	69	214	2684	4019	3880	-139	343		1338
9-10	142	66	205	2691	3991	3890	-95	355		1304
9-17	141	60	202	2691	3906	3817	-69	344		1285
9-24	140	65	205	2691	3905	3904	-61	159		1287
10-1	145	63	210	2691	3982	3911	-71	214	31	1287
10-8	144	68	208	2699	3983	3912	-73	130	19	1287
10-15	144	69	208	2698	3997	3917	-81	154	22	1287
10-22	143	70	212	2698	4029	3924	-105	147	21	1287
10-29	146	70	218	2699	3979	3908	-71	218	31	1286
11-5	156	71	220	2690	3944	3918	-26	177	25	1254

	D-1	2 ^v	3	5 ^v	6	7	8	9 ^v	12 ^v	15 ^v	18 ^v		
22	2	0	1	0	0	2	1	0	0	0	0	6	1
23	1	0	0	0	0	0	1	0	0	0	0	2	
24	1	0	0	0	0	1	0	0	0	0	0	2	
25	1	0	0	0	0	2	0	0	0	0	0	3	
26	0	0	0	0	0	0	1	0	0	0	0	1	
27	0	0	0	0	0	1	0	0	0	0	0	1	
28	2	0	0	0	0	2	0	0	0	1	0	5	1
29	1	0	0	0	0	0	0	0	0	0	0	1	
30	1	0	0	0	0	0	0	0	0	0	0	1	
31	0	0	0	0	0	0	0	0	0	0	0	-	
32	0	0	0	0	0	0	0	0	0	0	0	-	
33	0	0	0	0	0	0	0	0	0	0	0	-	
34	0	0	0	0	0	0	0	0	0	0	0	-	
35	0	0	0	0	0	0	0	0	0	0	0	-	
TOTAL	496	442	352	588	161	383	353	542	239	291	225	4076	
TOTAL INCIDENTS	2766	2308	1850	2867	909	2386	2178	2275	984	1455	960	20935	
INCIDENTS PER OPERATOR	5.6	5	5.3	4.9	5.6	6.2	6.2	4.2	4.1	5	4.3	5.7	

44-231

TOTAL INSTANCES OF ABSENCE BY OPERATOR ABSENCE FREQUENCY

Absences per Operator	Div. 1	Div. 2	Div. 3	Div. 5	Div. 6	Div. 7	Div. 8	Div. 9	Div. 12	Div. 15	Div. 18	Total
1	44	59	50	63	15	36	35	78	40	41	29	490
2	90	20	68	120	38	62	44	140	54	70	48	754
3	162	132	76	153	36	87	78	188	94	90	57	1173
4	204	244	116	224	44	100	152	200	100	112	92	1548
5	150	320	160	270	52	120	150	200	90	175	80	1527
6	198	246	114	282	60	162	156	180	48	72	102	1624
7	189	220	168	315	105	147	168	238	84	77	84	1855
8	128	192	104	224	80	128	160	256	120	112	80	1884
9	198	117	126	198	81	108	144	108	81	81	108	1350
10	150	160	100	210	50	160	190	110	70	160	60	1400
11	165	132	176	205	33	99	116	187	88	66	55	1386
12	96	108	120	168	72	180	120	72	12	36	72	1056
13	104	52	45	156	26	195	145	104	13	52	26	936
14	140	84	42	126	70	98	14	126	14	56	14	784
15	165	75	60	80	90	165	60	30	30	60	15	780
16	128	16	32	64	0	52	80	48	0	32	0	432
17	68	0	76	0	0	48	51	0	17	0	0	376
18	54	72	36	36	18	18	0	0	18	36	18	306
19	19	19	19	19	19	0	76	0	0	38	0	207
20	40	20	60	0	20	40	40	0	0	40	20	280
21	63	0	0	0	0	84	0	0	21	21	0	187
22	44	0	22	0	0	44	22	0	0	0	0	132

	D-1	D-2	D-3	D-5	D-6	D-7	D-8	D-9	D-12	D-15	D-18	
23	23	0	0	0	0	0	23	0	0	0	0	46
24	24	0	0	0	0	24	0	0	0	0	0	48
25	25	0	0	0	0	50	0	0	0	0	0	75
26	0	0	0	0	0	27	26	0	0	0	0	26
27	0	0	0	0	0	27	0	0	0	27	0	27
28	56	0	0	0	0	56	0	0	0	28	0	140
29	29	0	0	0	0	0	0	0	0	0	0	29
30	30	0	0	0	0	0	0	0	0	0	0	30
3977-231=17	0	0	0	0	0	0	32	0	0	0	0	32
36	0	0	0	0	0	36	0	0	0	0	0	36
38	0	0	0	0	0	0	38	0	0	0	0	38
Total	2766	2308	1850	2861	909	2386	2178	2225	984	1455	960	24938
<p>44 + 2125 use 14%</p> <p>6 Acad awards 2392 on 35%</p> <p>7 to 15: 9567 at 16%</p> <p>4 + 3525 on 10%</p> <p>9 + 10,167 on 95%</p> <p>20 922 - 2071 = 16,741</p> <p>4190 on 35%</p> <p>6053 - 2054 = 44</p> <p>2925 - 2817 = 17</p>												

Incidents of Absence 10-1-77 to 10-1-78

	D-1	2	3	5	6	7	8	9	12	15	18	Total	%	91%
Incidents of absence	0	79	57	60	78	17	55	36	74	34	29	38	577	13.6
	1	44	59	30	63	15	36	35	78	40	44	29	470	11.5
	2	45	10	34	60	19	31	22	70	27	24	24	577	9.2
	3	54	44	32	51	12	29	26	66	28	30	19	391	7.6
	4	51	51	29	56	11	25	38	50	25	23	13	387	9.5
	5	30	64	52	54	13	36	30	40	35	16	16	344	9.0
	6	33	41	19	47	10	27	26	30	12	17	12	270	6.6
	7	27	40	24	45	15	21	24	34	11	12	10	265	6.3
	8	16	24	13	28	10	16	20	32	14	12	10	191	4.8
	9	22	13	14	22	9	12	16	12	9	9	12	150	3.7
	10	13	16	10	21	5	16	19	11	16	6	6	140	3.4
	11	15	12	16	19	3	9	17	8	6	5	5	126	3.1
	12	8	9	10	14	6	15	10	6	3	6	6	88	2.2
	13	8	4	5	12	15	11	6	1	4	2	2	72	1.8
	14	10	6	3	9	7	1	9	1	4	1	1	56	1.4
	15	11	5	4	2	11	4	2	3	4	1	1	52	1.3
	16	8	2	2	4	0	5	3	0	2	0	0	27	0.7
	17	4	0	8	0	4	3	0	1	0	0	0	20	0.5
	18	3	4	2	2	1	0	0	1	2	1	1	11	0.3
	19	1	1	1	1	0	4	0	0	2	0	0	11	0.3
	20	2	1	3	0	2	2	0	0	1	0	0	9	0.2
	21	3	0	0	0	4	0	0	1	1	0	0	9	0.2

Appendix D