RECORD OF EQUIPMENT OUT OF SERVICE

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1. GENERAL

1.01 This section describes the method and the form to be used in recording details and in administering central office equipment which is out of service.

1.02 This section is reissued to agree with the Trunk Service Results Plan, Section 660-400-010. Except those trunks which are classifiied as intraoffice (IA), intermarker (IM), and miscellaneous (MI), outages of trunks will be covered by Section 660-400-010. Section 795-400-100 relates to classification of trunks. IA, IM, and MI trunk outages will be considered as equipment outages and recorded on Form E-4256, as required under the instructions within this section. All other trunk outages shall be recorded on the Trunk Outage Log Form E-4255, as described in Section 660-400-010.

1.03 The purpose of recording equipment out of service is to indicate the availability of equipment for customer service and to enable administration of restoral work. Since it is probable that the removal of equipment from service during the normal business day will affect customer service, prompt restoral of equipment to service, particularly for the busiest periods, should be a firm objective.

1.04 The outage control form described in this section will be used for keeping accurate records of equipment removed from service, so that the amount and duration of equipment outage can be readily determined and held to a minimum. This form shows the specific item of equipment affected, the duration of outage, and the serial number of the trouble ticket which should show details of the outage.

1.05 The outage control form is also used in connection with standard plans for measurement of switching service. The individual service results plan will specify use of normal business day (NBD) outage hours. If needed for a results plan, the NBD outage shall be recorded in the NBD column of the form, as herein described. If not needed for a results plan, it is nevertheless recommended that NBD outage be recorded and used for outage control administration.

2. DESCRIPTION OF NORMAL BUSINESS DAY (NBD)

2.01 A normal business day is generally the time period associated with a switching entity when outage may be expected to have a significant effect on service. NBD is not the same for all switching entities. The service results plan for each type of switching system that has equipment outage as a component defines the NBD (days and hours) applicable to that switching system. To determine the applicable NBD, reference should be made to the appropriate service results plan.

2.02 An abbreviated NBD is allowed for those offices which mainly serve a business community that largely terminates its activities around 5:30 P.M. each day. The purpose of the abbreviated NBD is to allow outage hours without penalty during a known period of prolonged light traffic.

2.03 If permitted by the service results plan, the abbreviated NBD may be assigned to a switching entity upon written approval of the Area or State General Plant Supervisor (or

equivalent) when the conditions described below have been met. The approval shall be reviewed and renewed no less than once a year. To make it available for audit purposes, a copy of the letter authorizing the abbreviated NBD shall be retained in the associated central office for one year.

2.04 In order to establish an abbreviated NBD for a switching entity, a study shall be made by the Dial Administrator of total day completion peg count for a period of at least ten consecutive normal business days. When at least 80 percent of the total day completion peg count occurs during the period from 9:00 A.M. to 6:00 P.M. on the normal business day sample, the abbreviated NBD may be used. Before a request for such a study is made, it is recommended that the maintenance force evaluate from readings of peg count registers the probability that the abbreviated NBD may apply. Details of the study by the Dial Administrator are to be included in the letter signed by the General Plant Supervisor (or equivalent) authorizing the abbreviated NBD for a switching entity.

3. WHEN TO RECORD AND COUNT EQUIPMENT OUTAGES

3.01 A record shall be kept of each item of equipment out of service for any reason except as permitted below.

3.02 The term "equipment" refers to any element of call-carrying equipment which, when removed from service, reduces to any degree the call-carrying capacity of the switching entity. It also includes duplicated units in Stored Program Control Systems such as No. 1 ESS, ETS, and TSPS.

3.03 The term "out of service" as used in this section refers to equipment which has been made unavailable for selection and use on a call. The method of removal may be by the use of plugs, switches, keys, blocking devices, other deliberate means, or automatically through transfer devices or other common control features.

3.04 An item of equipment which is operating improperly shall be removed from service promptly. The equipment shall not be restored to service until appropriate tests show that it meets all performance requirements.

3.05 Any equipment that is removed from service for any reason for nine minutes or less ***and*** where work related to the outage is in progress throughout the period, need ***not*** be recorded. This is not a nine minute exemption applying to all outages. If the outage extends beyond nine minutes, it shall be recorded as of the time the equipment was removed from service. The uninterrupted attention to equipment which has been made busy is illustrated in the following examples:

Permitted

A marker is removed from service for nine minutes or less for test. Such outage need not be recorded. If the outage lasts more than nine minutes, a record shall be made as of the time the marker was removed from service.

Not Permitted

A register is removed from service for testing. Within nine minutes, the testing work is interrupted for other work and the register is not restored to service during the interruption. This outage shall be recorded and must begin at the time the register was removed from service.

3.06 Sender out of service time due to sender trouble, tracing stuck senders, or holding by an operated Cancel Time Release key (or equivalent) is to be recorded and counted as outage except as excludable under the nine minute rule.

3.07 Outages shall start at the time that action is taken to deny normal accessibility to the equipment. The time that the equipment is removed from service is to be recorded. If this time occurs outside of the NBD, the outage shall start at the beginning of the next NBD if the equipment is still out of service.

3.08 Outage time continues during NBD periods until the equipment is restored to service in a condition fully capable of performing its intended functions.

3.09 Items of common equipment which may be provided as so-called "maintenance spare" shall be treated as though provided for customer service. Outages of such equipment shall be recorded.

3.10 Items of equipment which have been provided solely for test or measurement purposes (loop-around test trunks, APTT, TUR, etc.) and which are not used to provide customer service shall be recorded. However, the elapsed outage time shall not be subject to NBD outage measurement. For example, an outage of a tone trunk is subject to NBD outage, while an outage of a loop-around test trunk or TUR is not.

3.11 Outages of equipment turned down by order of the Traffic Department for special studies, network management, or local central office relief shall be recorded with a note showing authority such as name in the "Remarks" column, but not subject to NBD outage measurement.

3.12 When equipment is removed from service in connection with central office additions, modifications, and rearrangements, such outages shall be recorded, but shall not be subject to NBD measurement when a formal written method of procedure (MOP) for that job has been prepared and agreed to by the Telephone Company. A copy of the MOP shall be retained in the office file for three months. Outage of equipment in connection with central office installation work not covered by a written MOP shall be recorded and shall be subject to NBD measurement. When a MOP is the basis for excluding outage measurement, the MOP number shall be entered in the "Remarks" column.

4. HOW TO USE THE OUTAGE FORM

4.01 Record all outages of equipment, including trunks classified as IA, IM, and MI, on Form E-4256, Record of Equipment Outages. Entries shall be neat, legible, accurate, and current. It is recommended that time entries be made using the 24-hour clock. NBD outage time should be entered in increments of tenths of an hour. See Fig. I.

4.02 Start a new form at the beginning of each report period (typically on the 23rd of each month). When more than one sheet is used during a report period, number the sheets consecutively in the space provided.

4.03 At the start of a new report period and a new form, first make entries for all equipment still out of service which has been recorded on the forms for the previous period. For each entry of the previous period forms which is thus brought forward, enter "BF" in the "Restoral to Service" space. Carefully check the "Restoral to Service" spaces on forms for the previous period to be sure that all unclosed entries are brought forward to the current fom.

4.04 When any similar group of like plant items are removed from service at the same time, a single entry on the outage form will suffice. In the "Equip. and No." column, show the number of items of plant and encircle the number. When counting outage hours for this type entry, the NBD hours betwen the removal and restoral times must be multiplied by the number encircled.

4.05 The "NBD Outage" column is subdivided into two columns, "Plant" and "Other". The column "Plant" is provided for recording the elapsed outage time for equipment removed from service because of trouble or for tests, routine work, rearrangement, or cross-connection work performed by the maintenance forces. The column "Other" is provided for recording elapsed outage time due to forces other than maintenance.

4.06 At the end of the report period, if needed for a service results plan or other reasons, add the figures in the "NBD Outage" columns and record the totals in the space provided. If more than one sheet has been used, be sure to include the totals from all sheets.

4.07 In addition to providing the total NBD outage hours for the outage component of the various service results plans, the form provides for calculating the average NBD outage hours per outage. This can be used as an aid in controlling outage. To obtain this ratio, count the number of NBD outage entries and enter in the space provided. Divide the total NBD outage hours "Plant and Other," by the total number of outages. The quotient is the ratio and should be entered in the space provided.

4.08 At the start of each day, a review should be made of all entries on the previous day's record which have not been closed out. At least weekly and preferably daily, an inspection of equipment and apparatus should be made to determine that the form accurately reflects the status of equipment and apparatus in the office. Discrepancies should be promptly investigated and appropriate tickets prepared, entries made, and action taken.

Attached: Fig. 1

5. ORDERING INFORMATION

5.01 The form described in this section is packaged and ordered in the following manner:

PACKAGING INFORMATION

Form E-4256 — 25 forms to a package

ORDERING INFORMATION

Requisitions for this form, in multiples of the standard package units shown above, should be worded as follows:

(Quantity) Form E-4256

FORM E-4256
(4-67)

RECORD OF EQUIPMENT OUTAGE

MONTH April 1972

OFFICE OR MARKER GROUP 273+8

SHEET 3 OF ____ SHEETS

EQUIP AND NO.	TICKET NO.	OUT OF SERVICE					RESTORED TO SERVICE			N.B.D. OUTAGE		REMARKS
		BY	REASON	REFERRED TO	DATE	TIME	DATE	TIME	BY	PLANT	OTHER	
MRKR #3	8	RC	NO SLK 2		3/31	0950	4/3	0820	WF	12	2	
OR #24	10	WE	Wrg #'s registered		4/3	1000	4/3	1048	WE	8		
DPOS #4	11	RC	STUCK - 393 #16	HJ 393	4/3	1012	4/3	1022	RC	2		REPEATED See SHEET 2
PB Trk (10)	15	WE	no Tone Leg		4/3	1126	4/3	1248	WE	14	0	
Mrkr #0	-	WE	W.E. Co. Modification		4/3	1300	4/3	1830	WE			Mop #4 3/22/72
DTM #3	21	RC	BLOWN FUSE		4/4	0810	4/4	0820	RC			
APTC	23	WE	Can't start test frame		4/4	0900	4/4	1052	JM			
DTM #0	-	WE	Special Trf Study		4/4	1300	4/4	1400	WE			L. Smith Trf
OR #16	28	WA	WRONG #'S REGISTERED		4/4	2109	4/4	2159	WA	8		
MFOS #3	-	RA	WECO MOD.		4-5	0900	4-5	1100	RA		2 0	NO MOP

A 6 .TOTAL NUMBER OF OUTAGES

B.S.P. 201-114-001

B+C OUTAGE RATIO / A = 5.0

TOTAL NUMBER OF N.B.D. HOURS B 28 C 2

FIGURE I