The following error messages are printed by Function MARO.

These error messages for the most part appear on the output unit
specified by Technique ERRORPR. A few will appear on the output unit
specified by Technique PPPRINT or Technique DEBUGPR.

Certain errors will generate more than one error message, each message
conveying about the same information. An attempt has been made to
identify all such messages. Such grouped messages have been listed
under one error message number and assigned subheadings (e.g.,
messages 8a and 8b).

  1.   ** FATAL ERROR ** CANNOT INITIALIZE PPDB READ/WRITE ROUTINES

        Action: Contact your Support Team. There is a problem with
        the Preprocessor Data Base control records.

  2.   ** FATAL ERROR ** CANNOT INITIALIZE PPPDB READ/WRITE
        ROUTINES.

        Action: Contact your Support Team. There is a problem with
        the Preprocessor Parametric Data Base control records.

  3.   *** ERROR *** STATUS CODE OF XXXX ENCOUNTERED IN SUBROUTINE
        HGTSTR WHILE PROCESSING PREPROCESSOR DEBUG CODE NO. XX.
        PROCESSING CONTINUES.

        Action: Check the argument list of 4-character debug codes
        passed in Technique PPDEBUG.

  4.   *** ERROR *** STATUS CODE OF XXXX ENCOUNTERED IN SUBROUTINE
        HGTSTR WHILE PROCESSING BOXDUMP CODE NO. XX. PROCESSING
        CONTINUES.

        Action: Check the argument list of 4-character grid point
        hydrologic data codes passed in Technique BOXDKEY.

  5.   *** WARNING *** TECHNIQUE CONVEC HAS ARGUMENT CNVDIS OUTSIDE
        OF THE PERMISSIBLE RANGE. THE PERMISSIBLE RANGE IS FROM XXX.X
        TO XXX.X MILES. THE VALUE OF CNVDIS ENTERED IS XXXXXXXX.X
        MILES. THE VALUE OF CNVDIS HAS BEEN CHANGED TO XXX.X MILES.
        PROCESSING CONTINUES.

        Action: To avoid the error, change the argument in the
        Technique CNVDIS so that is within the permissible range.

  6.   *** WARNING *** TECHNIQUE VALUE OF 0 HAS BEEN ASSIGNED TO
        TECHNIQUE NAME XXXXXXXXXXXXXXXXXXXX. THIS VALUE MUST BE 1 AND
        HAS BEEN RESET TO 1. THE ARGUMENT IS SET TO XXXXXX.XXX

        Action: The warning occurred because one of the following

Techniques, APIMAX, APIMIN, APIRCMIN, or APIREC had their value explicitly set to zero. The values of these Techniques must always be equal to 1. Processing of the MARO Function will continue, however. To avoid the error message, do not attempt to set the Technique value of any of the above four Techniques to zero.

7.   *** WARNING *** SUBROUTINE RPDDTE WAS CALLED TO OBTAIN THE FIRST AND LAST JULIAN DATES ON THE PPDB FOR DATA TYPE XXXX. RPDDTE RETURNED WITH A STATUS CODE OF YYYY.

      Action: The warning occurred because data type XXXX is illegal, undefined, or has no stations reporting it. An attempt will be made to continue processing. Refer to IX.3.4B-RPDDTE for the source of the error indicated by status code YYYY, and take appropriate action.

8.   *** FATAL ERROR *** ENDING COMPUTATIONAL DATE OF XX/XX/XXXX IS MORE THAN ONE DAY AFTER THE LAST DAY ON THE PREPROCESSOR DATA BASE FOR PPDB TYPE TTTT. JULIAN DATE OF ENDING RUNDATE IS XXXXXXXX AND JULIAN DATE OF LAST DAY ON THE PPDB IS XXXXXXXX. THE MARO FUNCTION CANNOT BE RUN FOR MORE THAN ONE DAY IN ADVANCE. MARO FUNCTION HALTED.

      NOTE: TTTT stands for PP24 or PPVR.

      Action: The error occurred because an ending run date specified by Technique ENDRUN is later than the last day of data on file. Either (1) correct the ending run date if you are processing only observed data, or (2) if you are making a QPF run, turn on the FTWQPF Technique.

9.   *** FATAL ERROR *** ENDING COMPUTATIONAL DATE OF XX/XX/XXXX IS PRIOR TO THE FIRST DAY OF OBS. DATA ON THE PREPROCESSOR DATA BASE FOR PPDB TYPE TTTT. JULIAN DATE OF ENDING RUNDATE IS XXXXXXXX AND JULIAN DATE OF FIRST DAY ON THE PPDB IS XXXXXXXX. MARO FUNCTION HALTED.

      NOTE: TTTT stands for PP24 or /PPVR.

      Action: The error occurred because the ending run date specified by Technique ENDRUN is before the first day of observed data on file. Correct the ending run date and resubmit the MARO Function.

10.   *** ERROR *** ENDING COMPUTATIONAL DATE OF XX/XX/XXXX IS PRIOR TO THE FIRST DAY OF OBS. DATA ON THE PREPROCESSOR DATA BASE FOR PPDB TYPE MDR6. JULIAN DATE OF ENDING RUNDATE IS XXXXXXXX AND JULIAN DATE OF FIRST DAY ON THE PPDB IS XXXXXXXX. THE MDR USAGE FLAG IS BEING RESET TO ZERO. MARO FUNCTION CONTINUES.

      Action: The error occurred because the ending run date specified by Technique ENDRUN is before the first day of observed data on file. Since the error involved MDR data

instead of precipitation data, the MARO Function can continue, albeit without MDR processing. Correct the ending run date and resubmit the MARO Function.

11.   *** ERROR *** ENDING COMPUTATIONAL DATE OF XX/XX/XXXX IS AFTER THE LAST DAY OF OBS. DATA ON THE PREPROCESSOR DATA BASE FOR PPDB TYPE MDR6. JULIAN DAY OF ENDING RUNDATE IS XXXXXXXX AND JULIAN DATE OF FIRST DAY ON THE PPDB IS XXXXXXXX. THE MDR USAGE FLAG IS BEING RESET TO ZERO. MARO FUNCTION CONTINUES.

       Action: The error occurred because the ending run date specified by Technique ENDRUN is after the last day of observed data on file. Since the error involved MDR data instead of precipitation data, the MARO Function can continue, albeit without MDR processing. Correct the ending run date and resubmit the MARO Function.

12.   *** FATAL ERROR *** MARO FUNCTION HALTED DUE TO ERROR IN SUBROUTINE RPDFIL FOR DATA TYPE XXXX. STATUS CODE = YYYY.

       Action: The error occurred because data type XXXX is either illegal or has no expected pointers defined. Refer to IX.3.4B-RPDFIL and take appropriate action.

13.   ** FATAL ERROR ** WORKING SPACE REQUIREMENTS FOR XXXX DATA AND PARAMETRIC ARRAYS EXCEED LIMITS OF WORKING ARRAY. LIMITS OF WORKING ARRAY IS YYYYYY SLOTS, BUT REQUIREMENTS ARE FOR ZZZZZZ SLOTS.

       Action: The error occurred because MARO needed ZZZZZZ slots in the working array, but only YYYYYY were available. Contact your Support Team.

14a.   ** FATAL ERROR ** SUBROUTINE GTRNSF ATTEMPTED TO WRITE INTO AN AREA BEYOND THE LIMITS OF THE WORK AREA. MARO FUNCTION HALTED.

14b.   ** FATAL ERROR ** MAXIMUM LIMITS OF THE ARRAY HAVE BEEN EXCEEDED.

       Action: Both of these messages were caused by an error that occurred as the working array in MARO was being purged of arrays no longer needed, and data arrays were being moved from one beginning address to another. An address larger than the working array was somehow generated. Contact your Support Team.

15a.   ** ERROR ** RUNTIME MOD DATA FILE RETRIEVAL ERROR IN SUBROUTINE HMODCK CALLED FROM SUBROUTINE GMODGP. STATUS CODE = XXXX. THERE IS LIKELY A PROBLEM IN HCL INTERFACE ROUTINE. PROCESSING WILL CONTINUE -- BUT NO RUNTIME MOD DATA WILL BE AVAILABLE.

15b.   ** WARNING ** RUNTIME MOD DATA RETRIEVAL ERROR OCCURRED IN MOD DATA FILE. PROCESSING WILL CONTINUE -- BUT NO RUNTIME MOD

DATA WILL BE AVAILABLE.

Action: An error in the runtime MOD data retrieval software caused both of these messages. Contact your Support Team. In the meantime, you might want to attempt another method to get the MOD data into the MARO Function.

16a. ** FATAL ERROR ** UNABLE TO READ GBOX PARAMETRIC RECORD FOR GRID BOX XXXX. STATUS CODE = YYYY.

16b. ** FATAL ERROR ** ERROR IN PRECIPITATION ESTIMATION SUBROUTINE GESTMT. STATUS CODE = YYYY. MARO FUNCTION HALTED.

Action: The error occurred while reading the GBOX parametric array. See IX.3.6B-RPPREC for the meaning of the status code and notify your Support Team at.

17. *** WARNING *** NON-ZERO RETURN CODE OF XXXXX RETURNED FROM WPPDCO.

Action: The error occurred as MARO was attempting to update the Preprocessor Data Base control records. The update may not have been successfully completed. Contact your Support Team. Refer to IX.3.4B-WPPDCO for an explanation of the return code.

18. *** FATAL ERROR *** BEGINNING COMPUTATIONAL DATE OF XX/XX/XXXX AT XXZ SPECIFIES A FUTURE TIME. CURRENT DATE-TIME IS XX/XX/XXXX AT XXZ. CORRECT THE BEGINNING COMPUTATIONAL DATE AND RESUBMIT THE JOB. MARO FUNCTION TERMINATED.

Action: There is an error in the argument list to Technique STARTRUN. Correct the error and rerun MARO.

19. *** FATAL ERROR *** LAST OBSERVED DATA DATE OF XX/XX/XXXX XXZ IS MISSING OR INVALID. CORRECT ENDING DATE AND RESUBMIT JOB. MARO FUNCTION IS TERMINATED.

Action: There is an error in the argument list to Technique LSTCMPDY. Correct the error and rerun MARO.

20. *** FATAL ERROR *** BEGINNING COMPUTATIONAL DATE IS OF A LATER TIME THAN ENDING COMPUTATIONAL DATE. BEGINNING COMPUTATIONAL DATE IS XX/XX/XXXX AT XXZ. ENDING COMPUTATIONAL DATE IS XX/XX/XXXX AT XXZ. CORRECT THE INCORRECT DATE(S) AND RESUBMIT THE JOB. MARO PROCESSING TERMINATED.

Action: The error occurred because the argument to Technique ENDRUN must always be a later date than the argument to STARTRUN. Correct the errors and rerun MARO.

21. *** FATAL ERROR *** BEGINNING AND ENDING COMPUTATIONAL DATES ARE NOT 24 HOURS APART. MARO CAN ONLY BE RUN FOR A SINGLE 24-HOUR PERIOD AT A TIME. BEGINNING COMPUTATIONAL DATE IS XX/XX/XXXX AT XXZ. ENDING COMPUTATIONAL DATE IS XX/XX/XXXX AT

XXZ. CORRECT THE INCORRECT DATE-TIME(S) AND RESUBMIT THE JOB.
MARO PROCESSING TERMINATED.

Action: The error occurred because MARO can only be run for a
single day at once. Correct the errors and rerun MARO.
Multiple runs of MARO must be made in order to run multiple
days.

22.   *** FATAL ERROR *** CURRENT DATE OF XX/XX/XX XXZ (AS
DETERMINED FROM THE SYSTEM DATE-TIME CLOCK) IS MISSING OR
INVALID. MARO FUNCTION IS BEING HALTED.

Action: Contact your Support Team. The computer time clock
is evidently malfunctioning.

23.   *** WARNING *** MINUTES OF CURRENT TIME IS LESS THAN ZERO OR
EXCEEDS 59. MINUTES CHANGED TO ZERO. MARO PROCESSING
CONTINUES.

Action: None necessary, but it might be advisable to notify
HOD that there may be a problem with the computer time clock.

24.   *** FATAL ERROR *** BEGINNING RUNDATE OF XX/XX/XX XXZ IS
MISSING OR INVALID. CORRECT BEGINNING DATE AND RESUBMIT JOB.
MARO FUNCTION IS TERMINATED.

Action: Contact your Support Team. The computer time clock is
evidently malfunctioning.

25.   *** FATAL ERROR *** ENDING RUNDATE OF XX/XX/XX XXZ IS MISSING
OR INVALID. CORRECT ENDING DATE AND RESUBMIT JOB. MARO
FUNCTION IS TERMINATED.

Action: Contact your Support Team. The computer time clock is
evidently malfunctioning.

26.   *** WARNING *** 24 HR PRECIPITATION ON PPDB FOR STATION
XXXXXXXX - AAAAAAAAAAAAAAAAAAA (STATION NUMBER XXXX) IS
XXX.XX IN. THIS AMOUNT EXCEEDS THE MAXIMUM THRESHOLD VALUE OF
XXX.XX IN. THIS AMOUNT IN THE PPDB WILL NOT BE PROCESSED. IF
YOU WANT TO USE THIS AMOUNT...RESET THE MAXIMUM THRESHOLD
VALUE AND RERUN THE MARO FUNCTION.

Action: If you are convinced the report is valid, specify the
PP24MAX Technique with an argument sufficiently large to allow
the disputed precipitation amount to be accepted by MARO, and
rerun MARO.

27.   *** WARNING *** UNABLE TO SUCCESSFULLY READ THE PCPN
PARAMETRIC ARRAY. RECORD NO. = XXXX FILE TYPE = XXXX STATUS
CODE = XXXX PCPN PARAMETERS CANNOT BE PROCESSED WILL CONTINUE
WITH THE MARO FUNCTION, HOWEVER.

Action: An error occurred in RPPREC for parametric array PCPN
while attempting to get the call letters and name of a station

that had a precipitation amount larger than the specified maximum. Processing continues, but the original error message intended (see number 26 above) will not appear. Refer to IX.3.6B-RPPREC for an explanation of the status code. Contact your Support Team.

28. *** WARNING *** THERE IS NO MDR DATA AVAILABLE FOR XX/XX/XXXX. THE MDR DATA AVAILABILITY FLAG WILL BE RESET TO XXXX. PROCESSING CONTINUES.

Action: None. One or more of the Techniques requiring MDR data was specified, but they cannot be implemented, as there is no MDR data. To avoid the warning message, remove those Techniques from later MARO runs until MDR data does become available.

29. *** ERROR *** A STATUS CODE OF XXXX RETURNED FROM SUBROUTINE RPDDLY FOR DATA TYPE MDR6. NO MDR DATA WILL BE AVAILABLE FOR THIS RUN. THE MDR DATA USAGE FLAG IS BEING RESET TO XXXX. PROCESSING CONTINUES.

Action: None. One or more of the Techniques requiring MDR data was specified, but an error occurred while attempting to access the MDR data. Refer to IX.3.4B-RPDDLY for an explanation of the status code. To avoid the error message, remove those Techniques from later MARO runs until valid MDR data becomes available.

30. *** WARNING *** MDR 6-HOUR ACCUMULATION OF XXXXXX FOUND IN MDR BOX NUMBER XXXX FOR TIME PERIOD XX. ONLY 6-HOUR ACCUMULATIONS BETWEEN 0 AND 36 ARE ALLOWED. THE ACCUMULATION ON FILE WILL NOT BE USED.

Action: None needed, as a rule. A piece of bad data occasionally gets into the MDR6 Preprocessor Data Base, and causes the warning message. MDR processing continues. If very many such messages appear, you may wish to not use MDR with this run of MARO.

31. *** WARNING *** ARRAY W6 IS FILLED TO CAPACITY. ALL XXXXX SLOTS CONTAIN DISTRIBUTION INFORMATION. PROCESSING CONTINUES...BUT NO MORE DISTRIBUTIONS CAN BE HANDLED.

Action: Contact your Support Team that the W6 array has been filled. The W6 array holds the percentage distribution information for first order stations and MDR centroid grid points. There are only 6000 slots assigned, giving the array a capacity for 1500 point distributions. The MARO Function continues, but no further distribution data can be processed.

32. *** WARNING *** THE USER HAS REQUESTED SIX-HOURLY DISTRIBUTIONS TO BE DETERMINED BY MDR IN A QPF RUN. IN A QPF RUN...THE SIX-HOURLY DISTRIBUTIONS ARE DETERMINED BY A SET OF FOUR DISTRIBUTION CONSTANTS ENTERED WITH THE 'FTWQPF' TECHNIQUE. THE MDR SIX-HOURLY DISTRIBUTION FLAG IS BEING

RESET TO XXXX. PROCESSING CONTINUES.

Action: None. Techniques FTWQPF and FTWMDRDS have both been specified in the MARO run. These Techniques are mutually exclusive. To avoid the warning message, remove either one of the Techniques from later MARO runs.

33.   *** WARNING *** IN GMDRRF – USER INPUT MDR-TO-PRECIPITATION CONVERSION PROBABILITY TABLE OF XXXXXXXXX PCT IS INVALID. CONVERSION TABLES CAN ONLY EXPRESS PROBABILITY LEVELS OF 30 PCT, 50 PCT, OR 70 PCT. THE CONVERSION TABLE IS BEING SET TO THE CALIBRATED PROBABILITY LEVEL OF XXXX PCT BEFORE CONTINUING WITH THE PROCESSING.

Action: Correct the value of the Technique MDRTABLE and resubmit the MARO Function.

34.   *** WARNING *** 6-HOURLY PRECIPITATION AMOUNT OF XXXXXX AT ARRAY LOCATION XXXX IS OUT OF PERMISSIBLE RANGE. THE AMOUNT IS BEING SET TO ZERO.

Action: A value greater that the maximum permitted, or a value less than zero and not equal to a valid missing code, was found in the PPVR Preprocessor Data Base. If the value was greater than the maximum, and you are convinced the value is valid, change the argument to the PP24MAX Technique and rerun the MARO function. If an invalid negative value caused the message, use a runtime MOD to resubmit the 6 hour precipitation report to the MARO Function. If there are very many such messages, inform HOD that some invalid data is finding its way into the PPVR Preprocessor Data Base.

35.   *** ERROR *** TOO MANY FIELDS PRESENT IN CARD NO. XXXX. FIELD NO. XXXX HAS JUST BEEN PARSED. NO MORE THAN 6 FIELDS ARE PERMITTED ON CARD. REMAINDER OF CARD IS IGNORED.

Action: Correct the error in card image XXXX of the .GRIDPX runtime MOD data block. It has too many fields, either actual, or implied by the repeat factor (*). Refer to VI.5.3C-MARO-MOD for details of the .GRIDPX syntax. Contents of card image line up to the error will be processed.

36.   *** ERROR *** FROM SUBROUTINE GRTOV -- THE MOD HEADER CARD BEING PROCESSED IS:

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA SUBROUTINE UFIELD RETURNED A STATUS CODE OF XXXX. THIS MOD HEADER CARD AND THE MOD DATA WILL BE IGNORED. PROCESSING CONTINUES BY SEARCHING FOR THE NEXT MOD HEADER.

Action: Correct the date field in the .GRIDPX runtime MOD header card, and resubmit the job. The second field in the MOD header card, which should be a numeric date field, contains non-numeric data.

37.   *** ERROR *** FROM SUBROUTINE GRTOV – THE MOD HEADER CARD
      BEING PROCESSED IS:

      AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
      THE DATE FIELD IS INVALID. IT CONTAINS EITHER A MONTH, DATE,
      OR YEAR OUT OF THE PERMISSIBLE RANGE, OR IT CONTAINS AN
      INVALID TIME ZONE CODE. CORRECT THE DATE FIELD AND RESUBMIT
      THE JOB. PROCESSING CONTINUES BY SEARCHING FOR THE NEXT MOD
      HEADER.

      Action: Correct the date field with and resubmit the job.

38.   *** ERROR *** FROM SUBROUTINE GRTOV -- THE ARGUMENT LIST
      SUBMITTED IN THE CALL TO THE UDATEA SUBROUTINE CONTAINS ONE OR
      MORE INVALID ARGUMENTS.

      IPACK = XXXXXXXXX   (VALID RANGE: 0 TO 1)
      NHRADD = XXXXXXXXX   (VALID RANGE: -24 TO 24)
      NHSWCH = XXXXXXXXX   (VALID RANGE: 0 TO 1)

      THESE ARGUMENTS ARE SET IN THE PROGRAM...AND WERE NOT DESIGNED
      SO THAT THEY SHOULD BE CHANGED. PROCESSING CONTINUES...BUT NO
      FURTHER RUNTIME MOD DATA CAN BE PROCESSED.

      Action: Contact your Support Team and do not include any
      runtime MOD data with any further MARO runs. The three
      arguments are supposed to remain constant throughout the
      program, but some malfunction has caused the argument values
      to be changed.

39.   *** WARNING *** FROM SUBROUTINE GRTOV -- THE MOD HEADER CARD
      PROCESSED IS:

      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      THE DATE ON THE MOD HEADER CARD IS NOT BETWEEN THE BEGINNING
      AND ENDING RUNDATES.
      THE BEGINNING RUNDATE IS: XX/XX/XXXX XXTZC
      JULIAN DAY AND INTERNAL HOUR: XXXXXX XX
      THE MOD HEADER DATE IS: XX/XX/XXXX XXTZC
      JULIAN DAY AND INTERNAL HOUR: XXXXXX XX
      THE ENDING RUNDATE IS: XX/XX/XXXX XXTZC
      JULIAN DAY AND INTERNAL HOUR: XXXXXX XX

      THE MOD DATA ASSOCIATED WITH THIS MOD HEADER WILL NOT BE
      PROCESSED. IF YOU WISH TO USE THE MOD DATA...CORRECT THE DATE
      ON THE MOD HEADER CARD SO THAT IT IS GREATER THAN THE
      BEGINNING RUNDATE AND LESS THAN OR EQUAL TO THE ENDING RUNDATE
      AND RESUBMIT THE JOB. PROCESSING WILL CONTINUE BY SEARCHING
      FOR THE NEXT MOD HEADER.

      Action: Correct the date field on the runtime MOD header card
      as indicated and resubmit the job.

40.   ***** ERROR ***** IMPROPER RUNTIME MOD HEADING IN LINE LISTED
      ABOVE. THIS ENTIRE LINE WILL BE DISCARDED -- WILL SEARCH FOR

NEXT RUNTIME MOD HEADER LINE.

Action: Correct line where ".GRIDPX" should appear. The
entire block of data lines below this line will be ignored.
Refer to VI.5.3C-MARO-MOD for the syntax.

41. ***** ERROR ***** INVALID DATE FIELD IN RUNTIME MOD HEADER
     LINE LISTED ABOVE. THIS ENTIRE LINE WILL BE DISCARDED -- WILL
     SEARCH FOR NEXT RUNTIME MOD HEADER LINE.

     Action: Correct the date field in the ".GRIDPX" line. The
     entire block of data lines below this line will be ignored.
     Refer to VI.5.3C-MARO-MOD for syntax.

42. ***** ERROR ***** INVALID GRID POINT ADDRESS IN LINE NO. XXXX
     LISTED ABOVE. GRID POINT ADDRESS MUST CONSIST OF ALL NUMERIC
     CHARACTERS AND BE IN THE RANGE 100-9899. THE CONTENTS OF THIS
     LINE WILL BE IGNORED.

     Action: Correct the grid point address field in the data line
     and rerun MARO.

43a. ***** ERROR ***** PRECIPITATION AMOUNT OF XXXXX.XX IS LESS
     THAN ZERO AND NOT EQUAL TO A PERMISSIBLE MISSING CODE.

43b. ***** ERROR ***** INVALID 24 HR PRECIPITATION AMOUNT IN LINE
     NO. XXXX LISTED ABOVE. PRECIPITATION AMOUNTS MUST CONSIST OF
     ALL NUMERIC CHARACTERS AND BE POSITIVE OR ZERO. THE CONTENTS
     OF THIS LINE WILL BE IGNORED.

     Action: Correct the 24-hour precipitation field in the data
     line and rerun MARO.

44. ***** ERROR ***** INVALID SIX HOUR PRECIPITATION AMOUNT GIVEN
     IN LINE NO. XXXX LISTED ABOVE. PRECIPITATION AMOUNTS MUST
     CONSIST OF ALL NUMERIC CHARACTERS AND BE POSITIVE OR ZERO.
     THE SIX HOUR PRECIPITATION DATA WILL BE IGNORED.

     Action: Correct the 6 hour precipitation fields in the data
     line and rerun MARO.

45. *** ERROR *** INVALID SIX HOUR PRECIPITATION STRING IN LINE
     NO. XXXX LISTED ABOVE. SIX HOUR PRECIPITATION STRINGS MUST BE
     IN THE FORM F*NN, WHERE F AND N ARE POSITIVE INTEGERS OR REAL
     NUMBERS, AND NN MAY BE ZERO. THE SIX HOUR PRECIPITATION DATA
     WILL BE IGNORED.

     Action: Correct the repeat factor string submitted with 6
     hour precipitation data in the .GRIDPX runtime MOD. Non-
     numeric data was included with the repeat factor string. The
     only non-numeric character permitted is '*', or ',' (when used
     as a decimal point only).

46a. *****WARNING ***** PRECIPITATION AMOUNT OF XXXXX.XX EXCEEDS
     THE MAXIMUM AMOUNT OF XXXXX.XX. CHECK THE INPUT FOR POSSIBLE

TYPO ERROR.

46b.   ***** WARNING ***** PRECIPITATION ENTERED EXCEEDS XX.XX
        INCHES. VERIFY THAT THIS AMOUNT IS WHAT YOU WANT TO USE.
        PROCESSING CONTINUES WITH THE ENTERED AMOUNT.

        Action: A precipitation amount entered in a ".GRIDPX" data
        line was above the maximum permitted amount. If you are
        convinced the amount is valid, change the argument in the
        PP24MAX Technique and rerun MARO.

47.   ***** WARNING ***** THERE IS MORE THAN SIX FIELDS ON THE LINE
        LISTED ABOVE. ALL FIELDS AFTER THE SIXTH WILL NOT BE
        PROCESSED.

        Action: Remove the excess fields and rerun MARO. No ".GRIDPX"
        data line can have more than six fields.

48.   ***** WARNING ***** SIX HOURLY PRECIPITATION VALUE OF
        XXXXX.XX EXCEEDS INPUT MAXIMUM VALUE OF XXXXX.XX CHECK FOR
        POSSIBLE TYPE ERROR.

        Action: The error occurred because a precipitation amount
        submitted in a 6 hour precipitation field with the ".GRIDPX"
        runtime MOD exceeds the value of PP24MAX. If you are
        convinced the amount is valid, increase the value of the
        argument of PP24MAX and resubmit the job.

49.   ***** WARNING ***** REPEAT FACTOR IS TOO LARGE FOR NUMBER OF
        SIX HOUR PERIODS LEFT TO COMPUTE. YOU HAVE ENCODED A REPEAT
        FACTOR OF XXXX BUT YOU HAVE REMAINING ONLY XXXX PERIODS TO
        COMPUTE. REPEAT FACTOR VALUE CHANGED TO XXXX.

        Action: Correct the repeat factor in the data line, and rerun
        MARO.

50.   *** ERROR *** IN PRECIPITATION LIST PRINT ROUTINE...WORKSPACE
        REQUIREMENT OF XXXXX SLOTS EXCEEDS THE XXXXX SLOTS AVAILABLE.
        PRECIPITATION LISTS CANNOT BE PRINTED. HOWEVER...MARO
        PROCESSING CONTINUES.

        Action: Contact your Support Team. The number of entries in
        the named network has exceeded 1/4 of the total number of
        slots available in the working array.

51.   *** ERROR *** UNSUCCESSFUL RETURN FROM RPPREC FOR PARAMETER
        TYPE OG24. STATUS CODE = XXXX. PROCESSING OF THIS ROUTINE
        HALTED.

        Action: Refer to IX.3.6B-RPPREC for an explanation of the
        status code. Contact your Support Team the error when you
        tried to read the OG24 parametric array. Processing of the
        MARO Function continues, but no precipitation lists can be
        generated until the problem is resolved.

52. *** ERROR *** RPPREC ERROR IN GENERAL STATION PARAMETER
    ARRAY. ERROR CODE = XXXX
    Action: Contact your Support Team. The error occurred while
    trying to access the GENL station parametric array. Refer to
    IX.3.6B-RPPREC for an explanation of the status (or error)
    code. Processing continues, but the precipitation list being
    generated may contain invalid entries in some of the station
    NWS 5 character ID and station name fields.

53. *** WARNING *** YOU HAVE SPECIFIED A TIME INTERVAL OF XXXX
    HOURS. THE ONLY LESS THAN 24-HOUR TIME INTERVAL PERMITTED IN
    MARO IS 6 HOURS. THE TIME INTERVAL IS BEING CHANGED TO 6
    HOURS.

    Action: None necessary. When MARO can process less than 24-
    hour time intervals other than 6 hours, this message will no
    longer appear.

54. *** WARNING *** SIX-HOURLY PRECIPITATION VALUE OF XXXXXX.XX
    FOUND IN LOCATION XXXX. THIS VALUE WILL BE CHANGED TO ZERO.

    Action: None necessary. 6 hour precipitation listing routine
    encountered a negative number in the PPVR Preprocessor Data
    Base, which is invalid.

55. *** WARNING *** SIX-HOURLY PRECIPITATION VALUE OF XXXXXX.XX
    FOUND IN LOCATION XXXX EXCEEDS THE MAXIMUM ALLOWABLE SIX-
    HOURLY VALUE OF XXXXXX.XX. THIS AMOUNT WILL BE CHANGED TO
    ZERO.

    Action: If you are convinced the 6 hour value is valid,
    increase the argument to Technique PP24MAX and rerun MARO.
    Otherwise, no action is necessary.

56. *** ERROR *** SUBROUTINE GLST6 ENCOUNTERED STATUS CODE OF
    XXXX IN RPPREC FOR RECORD NO. XXXX OF GENL PARAMETER ARRAY.
    WILL PROCESS NEXT SIX-HOURLY REPORT.

    Action: Contact your Support Team. There appears to be a
    problem with the GENL parametric array. Refer to IX.3.6B-
    RPPREC for an explanation. The 6 hour precipitation listing
    being generated will continue, but some of the NWS 5 character
    IDs and station names will be invalid.

57. *** FATAL ERROR *** UNABLE TO READ RFRO PARAMETRIC RECORD FOR
    RELATION NO. XXX. STATUS CODE = XXXX.

    Action: Contact your Support Team. Refer to IX.3.6B-RPPREC
    for an explanation of the status code.

58. *** FATAL ERROR *** UNABLE TO READ MARO PARAMETRIC RECORD NO.
    XXXX, POINTER RECORD NO. XXXX. STATUS CODE = XXXX.

    Action: Contact your Support Team. Refer to IX.3.6B-RPPREC
    for an explanation of the status code.

59. *** WARNING *** RAINFALL-RUNOFF RELATION NO. XXXX FOR GRID
    POINT XXXX OF MARO AREA AAAAAAAA NOT FOUND. THIS DATA WILL BE
    IGNORED. RAINFALL-RUNOFF RELATION NUMBERS MUST BE BETWEEN 1
    AND 20 INCLUSIVE...AND ALMOST ALWAYS SHOULD BE LESS THAN 12.
    PROCESSING CONTINUES.

    Action: Contact your Support Team. Some invalid data has
    found its way into a MARO area parametric record.

60. *** FATAL ERROR *** APIG (GRID POINT API) CANNOT BE READ.

    Action: Contact your Support Team. There is a problem with
    the APIG Preprocessor Data Base.

61. *** FATAL ERROR *** NO GRID POINT API DATA EXISTS ON THE
    PREPROCESSOR DATA BASE FOR XX/XX/XXXX. YOU HAVE ATTEMPTED TO
    MAKE A QPF RUN FOR THE PERIOD ENDING XX/XX/XXXX. FOR THIS QPF
    RUN TO SUCCESSFULLY COMPLETE...YOU MUST HAVE API DATA FOR THE
    FIRST DATE GIVEN ABOVE. MAKE A MARO RUN FOR THE PERIOD ENDING
    XX/XX/XXXX BEFORE YOU SUBMIT THIS QPF RUN. MARO FUNCTION
    HALTED.

    Action: You have attempted to make a QPF run of the MARO
    Function more than one day in advance. The MARO Function can
    be run only one day into the future. You may be attempting to
    make a QPF run for tomorrow before the MARO Function has been
    run for today. Run the MARO Function at least once for today
    before you attempt to make a QPF run with future
    precipitation.

62. *** ERROR *** TTTT FOR AREA AAAAAAAA COULD NOT BE WRITTEN TO
    PROCESSED DATABASE. STATUS CODE = XXXX. WILL PROCESS NEXT
    AREA.

    NOTE: TTTT stands for MARO, MAPG, or MAPI.

    Action: Contact your Support Team. The error occurred while
    MARO was attempting to write to the Processed Data Base.
    Refer to IX.3.5B-WPRDD for an explanation of the status code.

63. *** WARNING *** TTTT FOR AREA AAAAAAAA HAS BEEN TRUNCATED.
    STATUS CODE = XXXX. WILL PROCESS NEXT AREA.

    NOTE: TTTT stands for MARO, MAPG, or MAPI.

    Action: Contact your Support Team. Refer to IX.3.5B-WPRDD
    for an explanation of the status code.

64. *** ERROR *** INSUFFICIENT WORKSPACE TO WRITE TTTT TO
    PROCESSED DATABASE. WILL TRY ANYWAY.

    NOTE: TTTT stands for MARO, MAPG, or MAP1.

    Action: Contact your Support Team. The size of the work
    buffer needed by the Processed Data Base Read/Write Routines

will have to be increased.

65.   *** WARNING *** FORECAST GROUP CODE OF AAAA NOT FOUND FOR
       FORECAST GROUP XXXX. WILL TRY TO PROCESS NEXT FORECAST GROUP.

       Action: Contact your Support Team. The array of 4-character
       forecast group abbreviations used by the MARO Function has
       developed a problem.

66.   *** WARNING *** API RECESSION CONSTANT OF XXXXX.XX IS LESS
       THAN MINIMUM VALUE OF XXXXX.XX OR GREATER THAN MAXIMUM VALUE
       OF XXXXX.XX. RECESSION CONSTANT WILL BE SET TO DEFAULT VALUE
       OF XXXXX.XX.

       Action: Change the arguments of Techniques APIMAX, APIMIN, or
       APIREC so that the value of APIREC lies between the values of
       APIMIN and APIMAX. Refer to VI.5.3D-TECH-APIMAX, -APIMIN, or
       -APIREC for syntax.

67.   *** ERROR *** AVAILABLE FILE SPACE EXCEEDED ON PREPROCESSOR
       DATA BASE FOR TTTT. XXXXXX VALUES WERE TO BE WRITTEN TO DATA
       FILE. DATE PROCESSED IS XX/XX/XXXX XXXXTZC (JULIAN DATE/HOUR
       XXXXXX/XX). SOME OF THE DATA LIKELY HAS NOT BEEN WRITTEN TO
       FILE. PROCESSING CONTINUES.

       NOTE: TTTT stands for APIG or PG24.

       Action: Contact your Support Team. WPDDLY returned with a
       status code of 1 (Refer to IX.3.4B-SYSTEM-WPDDLY).

68.   *** ERROR *** DAY TO BE WRITTEN ON PREPROCESSOR DATA BASE FOR
       TTTT IS NOT CONTINUOUS WITH OTHER PPDB DATA TYPES.

       DATE PROCESSED IS XX/XX/XXXX XXXXTZC (JULIAN DATE/HOUR
       XXXXX/XX). NO DATA WRITTEN TO FILE. PROCESSING CONTINUES.

       NOTE: TTTT stands for APIG or PG24.

       Action: Contact your Support Team. WPDDLY returned with a
       status code of 2 (Refer to IX.3.4B-SYSTEM-WPDDLY).

69.   *** ERROR *** SYSTEM ERROR ACCESSING PREPROCESSOR DATA BASE
       FILE FOR TTTT.

       NOTE: TTTT stands for APIG or PG24.

       Action: Contact your Support Team. WPDDLY returned with a
       status code of 3. (Refer to IX.3.4B-SYSTEM-WPDDLY).

70.   *** ERROR *** SUBROUTINE RPDGRD RETURNED A STATUS CODE OF XXXX
       FOR DATA TYPE TTTT. DATA TYPE TTTT CANNOT BE WRITTEN TO THE
       PREPROCESSOR DATA BASE. PROCESSING WILL CONTINUE.

       NOTE: TTTT stands for APIG or PG24.

Action: Contact your Support Team. Refer to IX.3.4B-SYSTEM-RPDGRD for details.

71.   *** ERROR ***   THERE ARE ONLY XXXXXX VALUES THAT CAN BE STORED ON THE PREPROCESSOR DATA BASE FOR DATA TYPE TTTT.   DATA TYPE TTTT REQUIRES XXXXXX VALUES...AND CANNOT BE WRITTEN TO THE PREPROCESSOR DATA BASE.   PROCESSING CONTINUES.

NOTE: TTTT stands for APIG or PG24.

Action: Contact your Support Team. The limits of the Preprocessor Data Base for the indicated data type needs to be changed.