Chapter 12

INTRODUCTION

This section of the Data Entry manual offers a detailed look at the AlarmMAP Data Entry Editor. The AlarmMAP editor provides the functions for creating and editing the database which AlarmMAP uses to distribute system alarms. These functions include establishing Alarm Centers, designating daily, weekend and holiday calling times, setting alarm filtering times, and marking the days of the year which are to be treated as holidays.

In many ways, AlarmMAP's data entry process is very similar to what is required for PressureMAP. Data is entered into the AlarmMAP database by using an editor that is nearly identical in function and appearance to the one used by PressureMAP. However, unlike the rather extensive setup procedures required for PressureMAP, preparing the data for AlarmMAP is relatively easy and performing data entry takes just a few minutes.

The AlarmMAP Data Entry Editor contains eight separate functions for creating the databases used by AlarmMAP. The editor is used to establish and modify data pertaining to:

- Alarm Centers
- Dates of Holidays
- Weekday Reporting Locations
- Saturday Reporting Locations
- Sunday Reporting Locations
- Holiday Reporting Locations
- Alarm Filtering
- Alarm Consistency Checks

Before beginning the AlarmMAP data entry process, be sure that you have a firm understanding of the details involved in establishing the Alarm Centers and their associated call times. These details include determining which PressureMAP offices are to report to which specific Alarm Centers and when the reporting is to take place.

Getting Started

Prior to starting the AlarmMAP data entry process, make sure that the MAP software has been installed on your computer. Then the AlarmMAP Alarm Center and calling time files must be established in order to get AlarmMAP up-and-running.

The process of creating these files begins by logging into the MAP System and accessing System Options Menu. If you have trouble setting up the computer system, installing the MAP software, or getting to the System Options Menu, please contact your IT personnel or call the Technical Support Department at System Studies Incorporated.

THE SYSTEM OPTIONS MENU

The AlarmMAP Data Entry Editor is reached from the System Options Menu shown in Screen 12-1. This opening MAP System menu consists of a heading, a list of system options, and the program Choice? prompt.

Offering several program functions, the first item on the System Options Menu is Select MAP Program. If you select this menu item, you will be brought to the MAP Programs Menu, where you can run one of the System Studies' Management Analysis Programs. It is from this menu option that you can manually run the AlarmMAP program (see Section 3 of the MAP System Operations Manual for details).

```
System Options                                    MAP Series  XX.XX.XX
01/02/2010  12:54                         System Studies Incorporated
-----------------------------------------------------------------------

System Options
--------------
  1. Select MAP Program
  2. Select MAP Data Entry
  3. System Administration
  4. Language Selection
  Q. Quit

Choice?
```

SCREEN 12-1: SYSTEM OPTIONS MENU

AlarmMAP DATA ENTRY

The AlarmMAP data entry process begins at the System Options Menu, as shown in SCREEN 12-1.

Procedure:

1. From the System Options Menu, select Item *2* (MAP Data Entry). Follow your selection with *<Return>*.

    After the data entry option has been selected, the screen will display the MAP Data Entry Menu (SCREEN 12-2). The MAP Data Entry Menu contains six data entry options, each one providing an entrance into the data editor of a particular MAP database. Through this menu, any MAP database can be created or modified.

    To create (or edit) the AlarmMAP database, select the number which corresponds to the AlarmMAP Data Entry Editor.

```
MAP Data Entry                                   MAP Series  XX.XX.XX
01/02/2010  13:05                                System Studies Incorporated
--------------------------------------------------------------------------------

MAP Data Entry
--------------
  1. PressureMAP Data Entry
  2. ReportMAP Data Entry
  3. CableMAP Data Entry
  4. AlarmMAP Data Entry
  5. DryerMAP Data Entry
  6. Special Data Entry
  Q. Quit

Choice?
```

SCREEN 12-2: MAP DATA ENTRY MENU

2. From the MAP Data Entry Menu **Choice?** prompt, select option **4**, AlarmMAP Data Entry, and press **<Return>**.

    If you do not wish to create or edit a MAP database, you may return to the System Options Menu from the MAP Data Entry Menu by selecting **Q** (Quit), followed by **<Return>**.

AlarmMAP DATA ENTRY OPTIONS

Once AlarmMAP Data Entry has been selected from the MAP Data Entry Menu, the program will display the AlarmMAP Data Entry Options (SCREEN 12-3). It is from this menu that all of AlarmMAP's editor functions begin and end.

```
Data Entry Options                                  AlarmMAP  XX.XX.XX
01/02/2010  13:13                                System Studies Incorporated
--------------------------------------------------------------------------------

AlarmMAP Data Entry Options
---------------------------
  1. Alarm Centers
  2. Dates of Holidays
  3. Weekday Call Times
  4. Saturday Call Times
  5. Sunday Call Times
  6. Holiday Call Times
  7. Alarm Filtering
  8. Alarm Consistency Check
  Q. Quit

Choice?
```

SCREEN 12-3: DATA ENTRY OPTIONS MENU

The AlarmMAP Data Entry Options Menu contains a list of eight AlarmMAP Data Entry Functions and the program's **Choice?** prompt. From this prompt, any of the AlarmMAP Data Entry Functions may be selected.

The first option, Alarm Centers, is used to establish and edit Alarm Center information. An Alarm Center is a location where AlarmMAP will report system-threatening conditions (alarms). A total of 72 different centers can be entered into the Alarm Center database, each of which is defined by this

option. Through this menu item, Alarm Center information may be created, viewed, edited or deleted.

The Dates of Holidays menu option enables you to specify a list of days within a calendar year that AlarmMAP will treat as holidays. With this option, it is possible to add, edit, and delete holidays from the Holiday List File.

The Weekday Call Times option is used to establish calling times and Alarm Center designations for normal weekday activities. An unlimited amount of different call times may be created for a single 24 hour period.

Like the Weekday Call Time option, the Saturday and Sunday Call Times selections are used to set calling times and Alarm Center designations. Using the information entered through these options, AlarmMAP determines where to send alarms which occur from midnight Friday to midnight on Sunday.

Holiday Call Times is used to add, delete, or change holiday calling times and Alarm Center designations. Selecting this menu item allows you to establish a special alarm distribution network for the dates established in the Dates of Holidays menu option.

The Alarm Filtering option is used to set times when certain Four Star Alarms are not dispatched to the Alarm Centers. This menu also contains the option for enabling Three Star Alarm distribution.

The last item on the menu, Alarm Consistency Check, lists the current status of Weekday, Saturday and Sunday Alarm Center reporting. In the following sections, each item on the AlarmMAP Data Entry Options Menu is described in detail.

ALARM CENTERS

Before AlarmMAP can function properly, an Alarm Center database must be established. Creating Alarm Centers, as well as modifying and deleting established Alarm Center data, is accomplished by selecting the first item on the AlarmMAP Data Entry Options Menu.
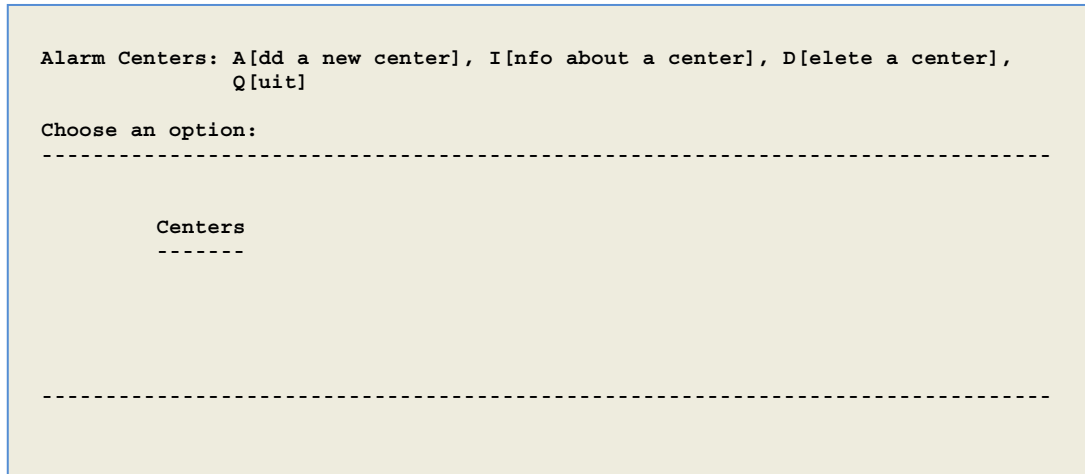
Procedure:

1. Select the first option from the AlarmMAP Data Entry Options Menu to access the Alarm Center database. Follow your selection with ***<Return>***.

    When Alarm Centers is chosen from the AlarmMAP Data Entry Options Menu, the Alarm Center Data Entry Screen will be displayed, as shown in SCREEN 12-4. This screen consists of three separate sections. The top two rows of the screen display the Alarm Center Function Menu. This menu lists the various editor functions available when creating and editing the Alarm Center database.

    Below the menu display is the program status line, which will at first display the prompt:

          Choose an option:

```
Alarm Centers: A[dd a new center], I[nfo about a center], D[elete a center],
              Q[uit]

Choose an option:
-------------------------------------------------------------------------------


        Centers
        -------




-------------------------------------------------------------------------------

```

SCREEN 12-4: ALARM CENTER DATA ENTRY SCREEN

Beneath the Alarm Center Function Menu and accompanying status line is the Alarm Center Listing. This portion of the screen lists all of the existing AlarmMAP Alarm Centers, in the order that they were entered into the Alarm Center database.

When accessing the Center Entry Screen for the first time (as in SCREEN 12-4), no Alarm Center names will appear in the Alarm Center Listing, since none have yet been entered into the system. However, once the data entry procedures have been completed, the Alarm Center Listing will contain the names of all the centers which have been input into the Alarm Center database. In all, the Alarm Center Listing may contain up to 72 different Alarm Center names.

To select a particular function from the Center Entry Menu, enter one of the following

A	Add a new Alarm Center
I	View or edit an existing Alarm Center
D	Delete an Alarm Center
Q	Exit the Center Entry Menu

Adding Alarm Center Information

The first item on the Alarm Center Function Menu, "Add a new center," generates the editor screen used to establish a new Alarm Center in the PressureMAP database.

Procedure:
1. From the Alarm Centers Screen, select option **A** to create a new Alarm Center. Press ***<Return>*** to complete your selection.

   When you choose to create a new Alarm Center, the following AlarmMAP prompt will be displayed on the status line:

   Name of center to add:

2. Type the name of the new Alarm Center that you wish to create and press ***<Return>***.

Alarm Center names may be composed of up to 20 alphanumeric characters. However, when referenced in the various call time files used by AlarmMAP, Alarm Center names will be truncated to 10 characters due to space limitations within the screen. Because of this, each Alarm Center name must be unique within the first 10 characters of the name. Offices, dispatch centers, and alarm centers should never share the same name. Some words and types of punctuation are reserved by the program and may NOT be used in an office name. These reserved names and punctuation forms include:

<u>**Reserved Names**</u>**: all, system, short, long, accept, diagnose**

<u>**Reserved Punctuation**</u>: \ / | , . < > ? ; : " { } [ ] ! @ # $ % & * ( ) _ + = '

Once a new Alarm Center name has been entered, the screen will display the Alarm Center Information Screen, containing information similar to what is shown in SCREEN 12-5. This screen lists all the data fields which make up the information describing an Alarm Center. When the Alarm Center Information Screen is first accessed, the cursor will be placed in the *Baudrate* data field.

```
Center Add:  Keypad Field Control, <Esc> end screen, <Ctrl L> redraw screen
        <Return> next field, <Backsp> delete char, <Ctrl B> previous field
-----------------------------------------------------------------------------

Center name:    REDBIRDS                 Baudrate:     1200
Phone number:   T123-4567                Modem Site:   LOCAL
Delivery mode:  SUMMARY REPORT           Clear mode:   NOT DELIVERED
Remarks:
Offices:
```

SCREEN 12-5: ALARM CENTER INFORMATION SCREEN

Once all the Alarm Center Data Records have been created, they will be placed in the file which makes up the Alarm Center database.

3. Complete the Alarm Center Data Record by filling in all the appropriate data fields shown on the Alarm Center Information Screen.

ALARM CENTER DATA FIELDS

To complete an Alarm Center Data Record, all of the information that pertains to a particular Alarm Center must be entered correctly into the appropriate data fields of the Alarm Center Information Screen. Guidelines for entering Alarm Center information in the appropriate fields are given below.

Using the Editor Function Keys, you may move about the data record as needed to edit any incorrect data that may have been input. TABLE 12-1 gives a brief explanation of the most widely used function keys. However, a complete description of the Editor Function Keys is given in the Preface located in Section 1 of this manual.

KEY	DESCRIPTION
<Return>	Completes a keyboard entry.
<CTRL B>	Moves the cursor back one data field.
<Backspace>	Moves the cursor back one screen position, erasing the character that occupied that position.
<CTRL L>	Redraws the data entry screen.
<ESC>	Exits the current data entry screen.

TABLE 12-1: MOST WIDELY USED FUNCTION KEYS

Below are descriptions of each of the various data fields that make up an Alarm Center Data Record.

Center Name
This data field displays the name of the new Alarm Center, as entered at the Center Entry Screen prompt.

Baudrate
This field contains the modem baudrate for the Alarm Center. For an ANP Alarm Center, this will be the baudrate for the pager company modem. Valid entries are 110, 300, 1200, 2400, 4800, 9600, 19200 and 38400. By default, this field is set to 1200 baud. If the speed of communications is 1200 baud, then no change needs to be made to this field. To step through a list of the baud rates, press the > or < keys. For an IP Alarm Center, baudrate is not applicable; consequently, it does not require any editing.

Phone Number
The *Phone Number* designation in the Alarm Center setup process is much more inclusive than the name indicates. Earlier versions of PressureMAP were based almost entirely on analog modem communications. Consequently, the phone number entry was, and still is, an important requirement for many systems. But today, with Local Area Networks, email, alphanumeric pagers, cell phones, etc., there are numerous other possible alarm delivery methods. These other methods require special entries in the Alarm Center *Phone number* data field as described in the underlined subsections below.

Sending Alarms via Modem
For standard modem alarm distribution, enter the telephone number of the designated Alarm Center into this 60-character data field. Before entering the phone number, however, be sure to test the complete dialing sequence of the number.

The complete phone number must be used, including any and all supplemental prefixes in the numeric sequence. Some examples of a prefix may be the 9 used in Centrex telephone systems (used to initiate calls outside the system) or the 1 that is needed to initiate a long distance call. Also, time any pauses that need to be made in order to receive dial tone or make a circuit connection. Wherever a delay is noted, insert a *W* in the telephone number string. A *W* in the

number sequence will instruct the PressureMAP modem to wait for dial tone before continuing with the dialing.

Inserting a capital **T** at the beginning of the phone number sequence instructs the modem to use tone dialing. It is important to note that not every telephone exchange has this capability. Because of this, PressureMAP will default to pulse dialing if the telephone number string does not begin with a T. If a phone number sequence needs to utilize both pulse and tone dialing, inserting a capital **P** in the sequence will instruct the modem to use pulse dialing.

Sending Alarms to the MAP Engine Console

If you would like dispatch alarms for a specified office or group of offices to display on the MAP Engine computer's monitor, you can enter **CONSOLE** in the *Phone number* data field. If desired, you can also specify one of the alarm delivery modes described in the following pages for the Console Alarm Center, or accept the default mode. Please note that beginning with PressureMAP Version 26.01.B3, it is possible to specify Brief Report and Condensed Report as possible delivery formats for a console center. Previously, these delivery modes only pertained to **EMAIL** alarm delivery.

Sending Alarms to a Printer(s)

The *Phone number* field can also specify a network printer as a dispatch alarm delivery site. Entering just the word PRINTER establishes the printer attached to the MAP computer as the location which receives system threatening alarm data. If the system has multiple printers configured in System Administration, enter the word PRINTER followed by the printer name to direct the dispatches to a specified printer, providing a hard copy of the Dispatch Conditions and Detailed Task Reports. To view the available printers, enter a ? in this field and the printers are displayed in spreadsheet selection mode (described in the Preface). Use the up and down keys to move to the desired printer and press <Return>.

Sending Alarms to FAX Machines

When the Alarm Center is a FAX machine, the prefix FAX must be listed first in the *Phone number* field. This prefix enables the MAP System to use the correct transfer protocol for a FAX machine. For example, the following phone number for a FAX machine will be dialed using touch tone. The number 9 will first be dialed, then there will be a pause before the rest of the number is dialed:

```
        FAX T 9W429-9907
```

Sending Alarms to Alphanumeric Pagers

Setting up an Alphanumeric Pager (ANP) as an Alarm Center in PressureMAP has special requirements. First, your pager must be alphanumeric; the software does not support "beepers." Next, you need to obtain the following specific information from the company that provides the paging service:

- The pager company phone number, which will be the modem number used by PressureMAP to send in information
- Pager company modem protocol (data bits, even/odd/none status, stop bits) and baud rate
- Pager ID# or PIN
- Pager password (if any)

A special entry made to the *Phone number* data field will allow an Alphanumeric Pager to become an Alarm Center. The prefix **ANP must** be listed first in the *Phone number* field, followed by the pager company modem number (e.g., ANP T 9 W [phone number]). In addition, the *Remarks* data field is reserved for the pager protocol code (data bits, even/odd/none status, stop bits) and pager ID number or PIN (if any). The **ANP** prefix (with the information entered in the *Remarks* field) enables the MAP System to use the correct transfer protocol for the pager. If you need assistance with entering this information, contact System Studies Technical Support.

Note: For all email alarm delivery options, described below, it is first necessary to configure the mail server as described in the Network Administration section of the *PressureMAP System Administration Manual*. If necessary, please contact your System Administrator for assistance with this procedure. It requires both a System Administration and a Network Administration password.

Sending Alarms via LAN (MAIL)

Alarms sent via a LAN (Local Area Network) to the mailbox of a user on the LAN provide a brief alarm data header that precedes the alarm report in the email message. This data includes the system name and number. To send email alarm reports, the prefix **MAIL must** be listed first in the *Phone number* field, followed by a space and then the name of the recipient (up to 55 characters in length). The recipient's name **MUST** be entered **EXACTLY** the same as the name the LAN mail (email) system uses (i.e., upper and lower case letters can be used to enter this name). You should be able to obtain a list of mail users and their aliases from your email System Administrator.

The following example depicts the information that needs to be entered in the *Phone number* data field for a user named Richard Ruth who has an alias of *rickruth* and receives his mail via the server BELLNET: *MAIL rickruth*. In addition, the mail server function needs to be configured and enabled before the alarms will be sent. Using the example above, the server name BELLNET must be entered via Network Administration before AlarmMAP can send alarms to the mailbox of the LAN user, Richard Ruth.

If the network or mail delivery function is disabled via Network Administration, any alarms that are in the queue (i.e., not yet delivered), will cause a Four Star System alarm to be generated. The contents of the alarm mail messages will be logged to the Undeliverable Mail Log File, which can be accessed and viewed using the View MAP Data Files menu option of the User Initiated Operations menu.

Sending Alarms via LAN to Multiple Email Addresses Defined as One Alarm Center

PressureMAP users who would like to specify a list of email addresses as an Alarm Center destination can do so beginning with PressureMAP Version 28. Using this capability significantly reduces the number of Alarm Centers that otherwise would be required to route alarms to desired recipients.

In order to set up this capability, you will first need to type the word, **LIST,** into the *Phone number* field in the Alarm Center Information Screen (Screen 12-5 above). When you press **<Return>** to advance to the next field, you will notice that the *Baudrate* and *Modem Site* data fields will be disabled. You will also notice that a prompt appears on the command line asking if you would like to **Change email address list Y[es], N[o]**. Typing *Y* produces

a new editor screen (Email List Editor Screen) where you can enter individual email addresses and descriptions. Type your list of email addresses (and descriptions, if desired) and press *<Esc>*. The program will then ask if the information is correct: `Correct? Y[es], N[o], T[hrow away changes]`. Typing *N* returns you to the Email List Editor Screen where you can make corrections, entering *T* discards your entry(s) and returns you to the Alarm Center Editor Screen; and typing *Y* saves your entry(s) and places you in the Alarm Center Editor Screen where you can continue entering center information.

Sending Alarms to Pagers via Email (Brief Report)

Some pagers have the capability of receiving email-generated messages (pages). For this type of equipment, you can set up an Alarm Center as an email pager and have AlarmMAP generate an abbreviated alarm report called a Brief Report (Screen 12-7). To designate this type of Alarm Center, you will need to type the word **MAIL** in the *Phone number* data field followed by the email address (pager callout phone number and domain name) of the intended recipient (e.g.: MAIL 8314755777@mypagercompany.com). You will also need to specify Brief Report as the designated *Delivery mode* in the Alarm Center Information editor.

Sending Multiple Alarm Notification to Pagers via Email (Condensed Report)

Another version of the Brief Report is provided for AlarmMAP users who would like to receive a single email notification via pager when multiple alarms develop in their PressureMAP system. As with the Brief Report, you will need to enter MAIL in the *Phone number* field followed by the appropriated email address used for the pager service. The Condensed Report is a hybrid version of the Brief Report and One Report delivery modes. In order to receive a Condensed Report, you must first designate an Alarm Threshold for One Report (refer to Alarm Filtering in this section). If the number of alarms generated in an office exceeds the threshold value entered, AlarmMAP will send a Condensed Report to your pager. This report identifies the PressureMAP system, the PressureMAP office in which the alarms originated, the number of alarms generated, and a message advising you to check the PressureMAP software for additional information.

Sending Alarms to a Cell Phone via Email SMS (Short Message Service)

Another email delivery capability is text messaging from a cell phone service provider via SMS. Almost all cell phone subscription plans provided by wireless carriers include inexpensive SMS messaging service. The first requirement for this alarm distribution option is to confirm that the alarm recipient's cell phone service provider offers SMS messaging service. If so, you can set up an Alarm Center designation for a cell phone and provide the required information in the *Phone Number* field of the Alarm Center Editor. When setting up the Alarm Center, you need to preface the number with the word MAIL. Then enter your text message email address—in this case, your 10-digit cell phone number and service provider. The following examples show the type of information needed in this data field for some of the more common SMS providers:

- MAILphonenumber@vtext.com (Verizon)
- MAILphonenumber@txt.att.net (AT&T)
- MAILphonenumber@qwestmp.com (Qwest)
- MAILphonenumber@tmomail.net (T-Mobil)

Like the email to pager alarm distribution setup described above, you will also need to specify either Brief Report or Condensed Report as the designated *Delivery mode* in the Alarm Center Information editor. Receiving Condensed Reports on your cell phone requires that you first set

an Alarm Threshold for One Report in the Alarm Filtering menu (see explanation near the end of this section).

Sending Alarms via a Network Connection (IP Address)

To send alarms via an installed network connection, enter the IP address of the Alarm Center in the *Phone number* data field as shown below. (Consult the local network administrator for the necessary IP address and port number information.) To specify a network connection in this data field, the IP address is prefaced with **IP=** and followed by a colon (*:*) and the port number:

```
Phone number: IP=xxx.xx.xxx.xxx:<port number>
```

Beginning with PressureMAP Version 26.01.B3, Brief Report and Condensed Report Delivery modes (and Clear modes) are allowed for a console center and network centers. These are Alarm Centers whose phone entry begins with "IP=" followed by an IP address and port number. Previously, Brief and Condensed alarm delivery modes were restricted to mail centers, and alarms sent to consoles and network centers did not indicate the system number and name.

Sending Alarms to an IP Socket for Use in External Database

Users who wish to import PressureMAP alarm information into a database or another application can do so more easily beginning with PressureMAP Version 28. A Perl alarm report was created that converts raw alarm data (constants and timestamps) to values that are meaningful to the user. The alarm report is sent to an IP address and port, where it can be retrieved and imported into a user database or other application.

This capability requires specific entries in several of the Alarm Center Information Screen data fields, as described below, to allow the Perl script-formatted alarm to be sent to an IP socket:

1) Preface the *Phone number* data field with **RAP** (Remote Asynchronous Protocol), followed by a <space>, **IP=**, the Alarm Center **IP address**, a colon (*:*) and the port number:

```
Phone number: RAP IP=xxx.xx.xxx.xxx:<port number>
```

2) Specify **FULL** for the *Delivery mode* and/or *Clear mode*:

```
Delivery mode: FULL REPORT
```

3) Enter the alarm report format designation in the *Remarks* field as shown:

```
Remarks: ALARM_RPT KEY_VALUE_ALARM
```

Once the alarm center has been set up, two types of script-formatted alarm reports will be generated for the reporting offices: 1) device related alarms and 2) system alarms. To provide consistency and make it easier for the user database to import the alarm information, all of the data fields in PressureMAP's histview alarm format will be included in the output.

Please refer to Release Note #84 in the *Reference, Release Notes, Software* section of the AirTalk website (www.airtalk.com/reference3.html). This document provides key/value definitions for each of the report items, and provides a sample of a device related alarm output.

__Sending Alarms Via Email Delivery in Key/Value Alarm Script Format__

It is also possible to deliver alarms in key/value format to an email address. This delivery mode is particularly helpful for anyone who has difficulty implementing a socket listener, as described above, to receive key/value alarms.

In order to send a key/value alarm script to an email address, it is necessary to add an email address to the end of the *Remarks* line that already specifies the RAP and Perl scripts to use. There are also data entry requirements for the *Phone number*, *Delivery mode* fields, as shown below. Note that email addresses are not sensitive to case.

```
Phone number:  RAP NONE
Delivery mode: FULL REPORT
Remarks:  ALARM_RPT KEY_VALUE_ALARM email_address
```

An example of an Alarm Center data entry screen for key/value alarm script email delivery is shown below:

```
Center Add:  Keypad Field Control, <Esc> end screen, <Ctrl L> redraw screen
        <Return> next field, <Backsp> delete char, <Ctrl B> previous field
--------------------------------------------------------------------------------

Center name:    LIVEOAK                   Baudrate:     1200
Phone number:   RAP NONE
Delivery mode:  FULL REPORT               Clear mode:   FULL REPORT
Remarks: ALARM_RPT KEY_VALUE_ALARM RJONES@AIRTALK.COM
Offices:
   CASTLEROCK    FALLCREEK
```

SCREEN 12-6: ALARM CENTER INFORMATION SCREEN (EMAIL DELIVERY IN KEY/VALUE ALARM SCRIPT FORMAT)

Modem Site

This field only appears if your PressureMAP system has at least one Digi PortServer II configured in Network Administration. It selects which PortServer will be used by PressureMAP to send alarms to the Alarm Center. Toggling the data field, using the **>** or **<** keys, will display the valid *Modem Site* entries. When the desired entry is displayed, press ***<Return>*** to accept.

Delivery Mode

Beginning in PressureMAP Version 26 a new, more efficient alarm distribution method is employed to help expedite the delivery of alarms and free up modem resources. Previous versions of the software attempted to deliver alarms associated with a particular office sequentially to each of the Alarm Centers defined for the applicable, user-defined Calling Time period. Delivery attempts were made until either a User Acknowledgment or an Auto Acknowledgment was received. Any additional alarms received for other offices while the delivery attempt was being made could not be distributed until the acknowledgment requirement was fulfilled in the current office. This method of alarm distribution eventually proved to be inefficient, as the number of offices that could be monitored by one PressureMAP system increased from the original 25 office maximum to the 250 office capability that can be monitored today.

When an alarm is detected in PressureMAP Version 26 and later releases, it is verified first to confirm that it meets PressureMAP's alarm criteria and, if so, it is distributed concurrently to each of the Alarm Centers in the applicable Call Time list. No acknowledgment is required and

multiple attempts (five by default) are made to deliver the alarm to a center if the first attempt is unsuccessful. The original AlarmMAP Delivery Modes of User Acknowledge and Auto Acknowledge have been replaced with the Summary Report mode described below.

Each Alarm Delivery Mode defines the way in which an Alarm Center is to be treated by AlarmMAP. The five modes available are described below. When the cursor is positioned in the *Delivery mode* data field, you can step through a list of these modes by pressing **>** or **<**.

- **Summary Report** Beginning with PressureMAP Version 26, the default AlarmMAP Delivery Mode is Summary Report. This default reporting mode instructs AlarmMAP to generate and deliver only a condensed alarm report to the center specified.

- **Full Report**   This reporting mode option instructs AlarmMAP to deliver both an Alarm Summary Report and a Detailed Task Report to the center. This reporting mode can be used to issue a Dispatch Alarm, complete with a Detailed Task Report to the specified center. Beginning with PressureMAP Version 28, the Full Report can be configured to provide separate lines of data which display both the Office Name containing the device in alarm and the associated Wire Center. This information is helpful to customer who use their own alarm data processing applications. It makes it easier to route both device-related alarms and system alarms to the appropriate destinations.

- **One Report**   There are times when PressureMAP needs to send multiple alarms to one or more Alarm Centers. The One Report Delivery Mode has been established to reduce the number of calls made to a center for the purpose of distributing individual alarm information (SCREEN 12-7). This mode gives you the ability—using the Alarm Filtering function—to set a threshold (number of alarms), above which only one report will be sent to the alarm center (see *Alarm Filtering* in this section). If the alarm threshold is not reached, this mode reverts back to the Summary Report mode. Please note that this report does NOT contain any specific information about individual alarms.

```
Dispatch Alarms for APTOS                                    AlarmMAP XX.XX.XX
07/05/2010  17:35                               System Studies Incorporated
-------------------------------------------------------------------------------

Task #  Device #  Condition                                            Level
------  --------  --------------------------------------------------   -----
               4 Alarms, Consult the MAP System for Details            ****

                           ----- One_Report -----
```

SCREEN 12-7: ONE REPORT DISPATCH ALARMS

- **Brief Report** This delivery mode pertains to the distribution of individual abbreviated alarm reports to pagers with the capability of receiving email messages, to cell phones with SMS text messaging capability and, beginning with PressureMAP Version 26.01.B3, to a console center and to network (IP) centers. It becomes a Delivery Mode option when you specify one of the following delivery methods in the *Phone number* data field: 1) MAIL followed by the email address of the pager or SMS service, 2) CONSOLE, or 3) IP, followed by an IP address and port number. An example of a typical Brief Report is shown below.

```
Office: OFFICENAME
PMAP Device: 003-04
PMAP Reading: SHRT none
PMAP Task#: 0640014
Short past Location 4
----- Dispatch Alarm -----
```

SCREEN 12-8: BRIEF REPORT

- **Condensed Report** Like the Brief Report, this mode specifies delivery of alarm information in abbreviated format to an alphanumeric pager or cell phone via email. Even if this mode is entered in the `Delivery mode` field, one or multiple individual Brief Reports will be emailed if you do not set a One Report Alarm Threshold in the Alarm Filtering section of AlarmMAP, or if the threshold value has not been reached. Once a threshold number has been defined, a Condensed Report will be issued whenever the number of alarms for an office exceeds the threshold number entered. SCREEN 12-9 represents an example of a Condensed Report sent to a pager via email.

```
Subject: PMAP ALARM- OFFICENAME
[1234]

PMAP System:    1234
PMAP Office:    OFFICENAME
PMAP Alarms:    4
Consult the MAP System for details.
 ----- Dispatch Alarm -----
```

**SCREEN 12-9: DISPATCH ALARMS,
CONDENSED REPORT MODE**

- **Not Delivered** If you would like to create Alarm Centers that receive only Cleared Dispatch Alarms, you would use the Not Delivered mode. In this mode, no alarms will be sent.

Clear Mode

As Dispatch Alarms clear, they are marked as cleared but not removed from the Dispatch List. These marked dispatch alarms are then distributed by AlarmMAP. The Dispatch Condition and Information remain the same, but the star level is replaced with "CLRD."

AlarmMAP delivers these Cleared Dispatch Alarms to the Alarm Center(s) specified for the current Call Time. Since it is no longer a requirement for Cleared Dispatch Alarms or Priority Alarms to be acknowledged at one of the Alarm Centers, they are removed from the dispatch list once they are sent to the assigned Alarm Centers or the maximum number of unsuccessful delivery attempts has been made.

The Clear Mode option uses the same modes that are available for the Delivery Mode. When the cursor is in the *Clear mode* data field, you can step through a list of these modes by pressing **>** or **<**. The Cleared Dispatch Alarm can be sent with or without regular Dispatch Alarms depending on how the *Delivery mode* data field is set.

- **Full Report** and **Summary Report** These two modes function the same way for cleared dispatches. When either of these reporting modes is selected, AlarmMAP will deliver the appropriate report type to the center. The two options can be used to audit cleared alarms by sending the report information simultaneously to more than one center.

  After the summary is delivered, AlarmMAP will continue to send the summary to the next Alarm Center listed in the Call Time List.

- **One Report** Like the Delivery Mode of the same name, the One Report Clear Mode prevents AlarmMAP from sending individual cleared alarm reports to an Alarm Center when a user-specified threshold has been exceeded. All cleared alarm reports for a center above the designated threshold will be sent a single report. Depending upon the actual conditions, the cleared alarm report will display information similar to what appears in SCREEN 12-7.

- **Brief Report** and **Condensed Reports** Cleared Dispatch Reports are also distributed in abbreviated format to pagers and cell phones via electronic mail, to the MAP System console and to network centers (IP addresses). SCREEN 12-9 represents the type of report that would be sent to an Alarm Center when multiple alarms have been cleared.

Remarks

The *Remarks* data field contains a place where you may enter special comments concerning the Alarm Center. Up to 70 characters may be entered into the *Remarks* data field.

For the special case of a ANP (alphanumeric pager), the *Remarks* data field is reserved for pager protocol information (data bits, even/odd/none status, stop bits) and pager ID number. The information must follow the format described below to ensure proper ANP delivery:

Remarks: TAP_ALARM_A "" _____ DON'T CHANGE THIS REMARK!

In the example above, the format's sequence is: pager protocol ("TAP_ALARM_A"), followed by a space, two quotation marks (double-quotes), space, and the pager ID number (the underlined blank). Fill in the blank with the pager ID number—**numeric** characters only (no dashes, hyphens, or spaces). After the pager ID number, there must be one space followed by at least one alpha character (we recommend using the text "Don't change this remark"). Information must be filled out completely and accurately; otherwise, pages will not be sent.

For help with entering this information, contact System Studies Technical Support.

Offices

The *Offices* data field is used to designate which PressureMAP offices will send alarms to the Alarm Center. Prior to PressureMAP Version 28, the maximum number of PressureMAP offices that could be entered in this data field was 73—72 offices plus the System office (Office 0). You can still select the individual offices that you would like to report to the Alarm Center, but now you also have the option of designating all of the offices in your PressureMAP system to report to the Alarm Center. By specifying **ALL** as the entry in the *Offices* data field, up 250 offices plus the System office, can be set up to report to the center.

The offices listed in this data field, or all of them if **ALL** was specified, will report to the Alarm Center, according to the Calling Time Schedules that have been set up. (For complete details on how to set up the Call Time Schedules, please refer to the sub-sections located later in this

section titled Weekday Calling Times, Saturday Calling Times, Sunday Calling Times, and Holiday Calling Times.)

When designating PressureMAP offices in this data field, be sure that the offices have first been input into the PressureMAP system. (See chapter 11 of this manual for complete details on how to create PressureMAP offices.) If you are unsure of the offices that have been input into the PressureMAP office database, enter a question mark *?* and press *<Return>* to obtain a full listing of the available PressureMAP offices. Then, after reviewing the offices, press any key to return to the *Offices* data field, and enter the offices that you wish to link to this Alarm Center.

If an office name (or number) is entered which cannot be found in the current PressureMAP office database, AlarmMAP will issue this warning message on the status line of the Data Entry Screen:

> `Invalid office specified.`

For AlarmMAP to function properly, you must manually delete this office name from the Center Information Screen.

Also, if you enter one or more office designations, and then decided that you want to add all of them by typing ALL in the data field, you will see the following message:

> `"ALL" only allowed at the first office.`

When creating Alarm Centers and Call Time Schedules, it is important that each PressureMAP office be referenced by one of the Alarm Centers in each established Calling Time List. With AlarmMAP, it is possible to create a schedule so that a particular PressureMAP office will go unmonitored by AlarmMAP. This can happen if a Calling Time List does not include an Alarm Center which is linked to the PressureMAP office. Before creating the AlarmMAP Alarm Centers and Call Time Schedules, carefully plan out the interaction between each PressureMAP office, the times of the week, and the office links to the Alarm Centers.

Completing the Alarm Center Data Record

Once all the data fields for the Alarm Center Data Record have been completed, press *<Esc>* to return to the Center Information Screen status line. (An alternate method of returning to the status line is to press *<Return>* from the last data field on the screen. In the case of the Alarm Center Entry Screen, this field would be the *Offices* data field.) When you return to the status line, AlarmMAP will issue the message:

> `Correct? (Y(es, N(o, T(hrow away entry)`

This message is asking you to double check the data which you have entered into the Alarm Center Data Record. If, after looking over the information entered, you decide that the data is correct, then enter *Y* to confirm the entry.

4.   Return to the status line and press *Y* to save the new Alarm Center. Complete the entry by pressing *<Return>*.

If the data which you have input is not correct, answer the **Correct?** message with *N*. This response will indicate to AlarmMAP that you are not satisfied with the Alarm Center Data

Record, and that you need to edit some of the information entered. If you press *N* and *<Return>*, the cursor will be returned to the Alarm Center Data Record, where you can use the Editor Function Keys to move to the desired data fields and make corrections to the data entered. Again, once you have finished with the data record, return to the status line **Correct?** prompt by pressing *<Esc>* (or press *<Return>* from the *Remarks* data field).

If the record you have entered contains several errors, it may be best to start over with a clean slate. If this is the case, then answer the **Correct?** prompt with a *T*, followed by *<Return>*. From here, you may re-enter the Alarm Center Data Record from scratch.

After all Alarm Centers have been created, you must specify the Calling Time Schedules, listing the links between the PressureMAP offices and Alarm Centers. For instructions on how to specify the schedules for the Weekday Calling Times, Saturday Calling Times, Sunday Calling Times and the Holiday Calling Times, please reference the corresponding sub-sections listed later in this section.

Edit an Alarm Center

The "Info about a center" option on the Center Entry Menu may be used to view or modify existing Alarm Center information. If an Alarm Center Data Record is incorrect (or if it needs updating), this option will allow you to make the necessary changes.

Procedure:
1. From the Center Entry Menu, select *I* followed by *<Return>*.

   When you choose to edit information concerning an Alarm Center, AlarmMAP will issue the following prompt on the status line:

   ```
   Information for which Center?
   ```

2. Enter the name or letter of the Alarm Center that you wish to edit or view. Finish your selection with *<Return>*.

   After selecting a center from the Alarm Center Listing, AlarmMAP will display the appropriate Alarm Center Data Record and the status line will read:

   ```
   Change center information? (Y(es, N(o)
   ```

   If, after viewing the Alarm Center Data Record, you decide that you do not need to edit the data, enter *N* and press *<Return>* to step back to the Center Entry Menu.

3. To edit the Alarm Center data, press *Y* followed by *<Return>*.

   If you confirm the request to edit the center's information, the cursor will be placed in the *Center name* data field of the Alarm Center Screen. Making use of the Editor Function Keys, move to the appropriate fields of the data record and make the necessary corrections.

   After each data field has been updated, be sure to press *<Return>* to complete the entry of the new information into the Alarm Center Data Record.

   When you have finished editing the data record, press *<Esc>* to return to the status line. AlarmMAP will respond with the message:

```
        Correct? (Y(es, N(o, T(hrow away changes)
```

Before answering the **Correct?** prompt, take the time to review the new information entered.

4. If the new Alarm Center information is correct, press *Y* and *<Return>* to regain the Center Entry Menu.

    If the center data record still needs to be edited, then answer the **Correct?** prompt with *N*, and press *<Return>*. From here, AlarmMAP will re-position the cursor into the *Delivery mode* data field, and you may continue to make changes to the Alarm Center Data Record. Again, when the data record is complete, press *<Esc>* to return to the status line **Correct?** prompt.

    The last option available from the **Correct?** prompt is to discard all changes made to the data record. By typing *T*, followed by *<Return>*, all changes made to the data record will be abandoned, and you will be returned to the Center Entry Screen.

Delete an Alarm Center

As the function name implies, the "Delete a center" menu option allows you to delete an Alarm Center from the Alarm Center database. This option of the AlarmMAP editor will erase all file data for the Alarm Center selected. In addition, it will also remove the center's name from the Alarm Center Listing.

The "Delete a Center" option does not, however, remove the references made to the Alarm Center in the various calling time files. Removing Alarm Center references must be done manually for each Calling Time Schedule that contains a reference to the Alarm Center you wish to delete. (For specific information on deleting calling times and Alarm Center references, refer to the sub-sections titled Weekday Calling Times, Saturday Calling Times, Sunday Calling Times, and Holiday Calling Times listed in this section.)

Note that you must remove all references to the appropriate Alarm Center from all calling time files BEFORE you attempt to delete an Alarm Center from the Alarm Center database.

Once all references to an Alarm Center have been removed, you can delete the Alarm Center from the database by following the editing procedures explained below.

Procedure:
1. From the Center Entry Menu, select *D*, followed by *<Return>*.

    After selecting Delete a Center, the status line will display:

```
        Delete which center?
```

2. Enter the letter or name of the center you wish to delete from the Alarm Center Listing.

    After entering an Alarm Center name or letter, AlarmMAP will respond with:

```
            Are you sure you want to delete <CENTERNAME>?
            (Y(es, N(o)
```

Before answering this prompt, make sure that the correct Alarm Center name appears on the status line. If there is any discrepancy with either the center name or letter, enter the letter *N* and press *<Return>*. This entry will override the Delete command, producing a **Choose an option:** prompt on the Center Entry Menu status line.

3. If the Alarm Center name is correct, enter the letter *Y*, followed by *<Return>*.

    If you have not deleted all references to the Alarm Center in the calling time files, AlarmMAP will issue a warning message, as shown in SCREEN 12-10.

```
 Center "BLUEBIRD" may not be deleted.
 -------------------------------------------------------------------------------
     This center is used by one or more of the Time files as a reporting center
     for incoming alarms. To delete this center:
        1) Go back to the AlarmMAP Data Entry Menu
        2) Choose options 3 through 6 (Weekday, Saturday, Sunday, & Holiday
           Call Times)to check for use of this center.
        3) If the center is listed in a Time file:
           a) Move the cursor to the Center name.
           b) Hit the space bar once, then <Return> to remove the name.
           c) Remove all references to the center.
        4) Return to this menu and use the D(elete option to remove the center.

     Hit <Return> to continue...
```

SCREEN 12-10: WARNING MESSAGE

If you receive this warning message, follow the instructions displayed on screen to delete all center references. When you have completed these procedures, you may then perform the Delete a Center function for the Alarm Center you wish to delete.

After the Alarm Center has been deleted, the screen will change to the Center Entry Screen, and you may choose another AlarmMAP Data Entry Function.

Quit Alarm Center Data Entry

The final Center Entry Menu option is Quit. As the name indicates, this option is used to exit the Alarm Center portion of the editor and return to the AlarmMAP Data Entry Options Menu. It is important that you correctly exit or log off of the MAP System before you leave the computer.

Procedure:
1. From the Center Entry Menu, select *Q*, followed by *<Return>*. When this option is selected, the screen will display the AlarmMAP Data Entry Options Menu. If you wish to continue working with the AlarmMAP editor, select any of the options listed on this menu. If you have finished working with the MAP programs, you may properly exit the MAP System by selecting the last menu item on each menu displayed, until you have completely exited the system.

2. Enter a **Q** for Quit, followed by **<Return>**. This step will return you to the MAP Data Entry Menu. The final step in exiting the MAP editor is to return to the System Options Menu.

3. Select Item **Q**, followed by **<Return>** to exit the MAP Data Entry Menu. The System Options Menu will be brought up when the MAP Data Entry Menu is exited.

4. To completely exit the MAP System, choose the last item from System Options Menu. Follow your selection with **<Return>**.

DATES OF HOLIDAYS

AlarmMAP is structured to allow certain days of the year to be declared as holidays. By establishing specific dates in the Holiday List File, the reporting of alarms can be customized to account for special circumstances caused by holidays and vacations. On days declared as holidays, the reporting of alarms can be routed to specially designated Alarm Centers.

Make note that declaring holidays is not mandatory for the proper operation of AlarmMAP. This feature is provided in order to accommodate the requirements of various Operating Companies whose operations and staffing change as a result of holidays and personal vacations. If your company does not utilize special holiday calling times and Alarm Center references, then you will not need to use this feature of the program.

However, if you would like to have alarms reported to special locations on specific days of the year, then you will want to complete the Holidays List File and customize the calling times for the days that are considered holidays.

The first step towards creating special reporting criteria for holidays is to specify the days of the year that are to be considered as holidays. The process of establishing holiday dates is the sole function of this AlarmMAP Data Entry Function.

Procedure:

1. Select Item **2** from the AlarmMAP Data Entry Options Menu to create a list of special company holidays.

   When Dates of Holidays is selected, the Dates of Holidays Screen will be presented (SCREEN 12-11). This screen is divided into three sections. The first section is the Dates of Holidays Menu. Listed on the first two lines of the screen, this menu displays the options that are available through this AlarmMAP Data Entry Function.

```
 Annual Holidays: Keypad field Control, <Esc> end screen, <Ctrl L> redraw screen,
          <Return> next field, <Ctrl Z> help

  Enter date in "MM/DD/YY" format
  -------------------------------------------------------------------------------
          Date                        Holiday
          -------------------------------------------------------

  -------------------------------------------------------------------------------
```

SCREEN 12-6: DATES OF HOLIDAYS

Below the Dates of Holidays Menu is the program status line. When the Dates of Holidays Screen is first accessed, the status line will show the message:

```
Enter date in "MM/DD/YY" format:
```

Underneath the menu and status line is the Dates of Holidays Listing. When this menu item is accessed for the first time, this area of the screen will be blank. However, as you enter specific holiday dates, these dates will be shown in this listing area. Using the Editor Function Keys, you may move about the holiday list as needed to edit any incorrect data that may have been input. These keys are discussed in the Prefix section of this manual.

Add a Holiday

The first thing to do when setting up a day of the year for special alarm reporting is to add the date to the Holiday List File. You can input an unlimited number of dates to this list, enabling you to enter holiday dates for two years or more.

Procedure:
1. From the Dates of Holidays Screen, press *<Ctrl A>*. The status line will prompt:

```
Enter date in "MM/DD/YY" format:
```

Type the date of the holiday, followed by *<Return>*.

Once you have correctly entered a holiday date, the cursor will move to the *Holiday* data field.

2. Type the name of the holiday into the field, followed by *<Return>*.

When entering holidays, note that it is not necessary to input the dates in chronological order. AlarmMAP will insert them into the Annual Holiday Schedule in the proper chronological order.

While the *Holiday* data field does not need to be filled out for the proper functioning of the program, describing the holiday will help to clarify the special date. Holiday names can be composed of 1 to 30 alphanumeric characters.

When you have finished inputting the holiday dates, press *<Esc>*. The cursor will return to the status line, where the following message will be displayed:

```
Correct? (Y(es, N(o, T(hrow away entry)
```

From this prompt, three responses are possible:

- If the holiday date and name are correct, respond with *Y* and press *<Return>* to save the data to the Holiday List File.

- If either the date or the holiday name need to be edited, answer the **Correct?** prompt with *N* followed by *<Return>*. This input will place the cursor back into the holiday data record, where you will be able to edit the data fields. When the two fields are correct, return to the status line by pressing *<Esc>* from the *Holiday* data field.

- If you wish to abandon the holiday entry altogether, enter **T** and press **<Return>**. This input will discard the data entered into the Holiday Date Record, and will return the cursor to the *Date* data field. From here you can re-enter the correct holiday data or press **<Esc>** to return to the status line.

3. If the Holiday Date Record is correct, press **Y**, followed by **<Return>** to save the data to the Holiday List File.

   When a new Holiday Date Record is created, it will be added to the Holiday List File. Alarms generated on the dates in this file will be distributed to the Alarm Centers designated with the Holiday Call Times editor function. (For more information on setting up the Alarm Centers with the calling times, please refer to the sub-section titled Holiday Calling Times, listed later in this section.)

Delete a Holiday

If, for any reason, you find it necessary to delete a holiday (or holidays) from the Holiday List File, you will need to use the Editor Function Keys to move to the holiday you wish to delete.

Procedure:
1. Press **<Ctrl Y>** to move down to the date of the holiday you wish to delete.

2. Press **<Ctrl D>** to delete the date the cursor is on.

   This option does not have an "undo" feature. If a date is mistakenly removed, you need to press **<Esc>** and select **T** to throw away the editing session.

3. If you wish to delete another holiday, use the Editor Function Keys described in the Prefix to move about the holiday list.

   When you have finished removing all unwanted holidays from the Holiday List File, press **<Esc>**. AlarmMAP will then return to the Data Entry Options Menu.

Quit Dates of Holidays Editor

When you have finished editing the Holiday List File, press <Esc> and you will be returned to the AlarmMAP Data Entry Options Menu.

ESTABLISHING CALLING TIMES

Once you have established all the Alarm Centers and have updated the Holiday List File, you will need to designate weekday, Saturday, Sunday, and holiday calling times and alarm destinations.

Items #3, #4, #5, and #6 on the AlarmMAP Data Entry Options Menu are used to set up the Calling Time Files needed to distribute system alarms. By establishing calling times and their associated Alarm Center destinations, AlarmMAP will know when and where to distribute dispatches caused by potentially damaging problems located in the pressurization system.

In all, up to 72 Alarm Centers can be set up to receive alarm messages for any given time during the day. By establishing a Calling Time List, a group of Alarm Centers is put in the sequence in which they are to be contacted during the specified period of time.

When AlarmMAP detects a Four Star Alarm, an Alarm Summary will be sent to each successive center established for the Calling Time List. The menu items Weekday Call Times, Saturday Call Times, Sunday Call Times, and Holiday Call Times are each used to establish the time of day and Alarm Center order which the alarms are to be distributed.

The four call times menu items are very similar in structure and function. The only difference among them is the actual part of the week (or given day of the year) that is affected by the setup created.

While AlarmMAP requires that both weekday and weekend calling times be established, creating holiday calling times is not mandatory. The capability to develop special holiday reporting centers and calling times is provided as a tool for companies that wish to use this feature to define a special Calling Time Schedule for a given day (or days) of the year.

WEEKDAY CALL TIMES

After setting up the Alarm Centers and establishing holiday dates, the next step when setting up AlarmMAP is to define the Weekday Calling Times.

Procedure:

1. From the AlarmMAP Data Entry Options Menu, select Item *3*, and press *<Return>*.

    When Weekday Call Times is selected, the Weekday Call Time Information Screen will be presented (shown in SCREEN 12-12).

    This screen is broken up into two different sections. The first section, the Weekday Call Time Menu, is listed on the first two lines of the screen. The second section, Calling Time Schedule, is the complete series of all the individual Calling Time Lists. Each Calling Time List shows the specific calling time and sequence of designated Alarm Centers which are to be contacted during that time period.

```
Weekday Times: Keypad field Control, <Esc> end screen, <Ctrl L> redraw screen,
         <Return> next field, <Ctrl Z> help


    --------------------------------------------------------------------------------
00:00




    --------------------------------------------------------------------------------
```

SCREEN 12-7: WEEKDAY CALL TIME INFORMATION SCREEN

Using the Editor Function Keys available through the Weekday Call Time Menu, a file is created which is used for all weekday alarm distribution. The call distribution network is based on a 24-hour schedule that is in effect from 00:00 (12 o'clock midnight) on Monday morning to 11:59 p.m. on Friday night, each week of the year.

Add a Calling Time

Call times are used to designate the Alarm Centers that will receive alarms during the weekday time periods specified. Adding a weekday calling time involves defining the actual calling time, and listing the Alarm Center references.

By default, AlarmMAP begins its calling sequence at 00:00 (12 o'clock midnight). This number will appear as the first calling time entry in each calling time option. The time 00:00 is permanent; it cannot be deleted. If no additional times are entered, all alarms occurring from midnight to midnight will be sent to the Alarm Centers entered on the first line of the Call Time Schedule. Once a calling time is added to the schedule, all alarms will be distributed to the designated Alarm Centers from the time indicated until the next time entered, or until midnight. For example, if you enter the two calling times of 8:00 and 17:00, three calling schedules will be defined. SCREEN 12-13 shows these three calling schedules and the centers that have been designated to receive alarms during the three time periods. Alarm distribution would be as follows:

- 00:00 a.m. (midnight) to 08:00 a.m – Alarms would be sent to the following alarm centers: D.Soquel and C.Liveoak.

Note: Prior the PressureMAP Version 26 and PressureMAP Server 1.00, alarms would be sent first to the Soquel Alarm Center and then to the Liveoak center (sequential alarm distribution). The current *sendalarm* process invokes a master executable which spawns an agent executable for each center. Calls are placed concurrently to the various centers regardless of their order in the Calling Time List.

- 08:00 a.m. to 17:00 (5:00 p.m.) – Alarms would be sent to the following alarm centers: E.Bluebird, B.Console, C.Liveoak, F.Seabright, I.Main, D.Soquel, J.Aptos, K.Scotts Valley, G.Wrights, H.Black Rd, N.Westside, O.Summit, V.University and L.Holy City.

- 17:00 (5:00 p.m.) to 23:59 p.m. – Alarms would be sent to the following alarm centers: F.Seabright, E.Bluebird, and C.Liveoak.

```
Weekday Times: Keypad Field Control, <Esc> end screen, <Ctrl L> redraw screen,
          <Return> next field, <Ctrl Z> help
Enter a time, use "HH:MM"
------------------------------------------------------------------------------
00:00  D.SOQUEL          C.LIVEOAK

08:00  E.BLUEBIRD        B.CONSOLE        C.LIVEOAK        F.SEABRIGHT      I.MAIN
       D.SOQUEL          J.APTOS          K.SCOTTSVALL     G.WRIGHTS        H.BLACKRD
       N.WESTSIDE        O.SUMMIT         V.UNIVERSITY     L.HOLYCITY

17:00 F.SEABRIGHT         E.BLUEBIRD        C.LIVEOAK


------------------------------------------------------------------------------
                                                         AlarmMAP   XX.XX.XX
```

SCREEN 12-8: WEEKDAY CALL TIME INFORMATION SCREEN

AlarmMAP enables you to add an unlimited number of calling times within a 24-hour period. With each calling time declared, a maximum of 72 Alarm Centers can be referenced.

Procedure:

1. The cursor starts each editing session at the first Alarm Center in the 00:00 time. At this point, you may create a new Calling Time List, or you may add Alarm Center references to an existing time (if you are creating a new Calling Time Schedule, the only calling time listed will be 00:00).

2. Enter *<Ctrl A>* and the message below will appear above the Alarm Center List.

   Now enter a time specification which represents the calling time that you wish to add to the Alarm Center List.
   Times must be specified in a 24-hour time format. For example, 1:00 p.m. will be indicated by 13:00. The indicated minutes must be separated from the hour by a colon (:).

   If the time entered corresponds to a time that is already located in the Calling Time File, AlarmMAP will issue the following warning message:

   > **Time <TIME> already exists.**

   Once a time has been correctly selected, AlarmMAP will position the cursor in the Calling Time Schedule, under the first Alarm Center in the respective Calling Time List. From here, enter the Alarm Centers that you wish to designate for this calling time period. Once again, the order in which centers are added is not critical in Version 26 and PressureMAP Server Version 1.00.

3. Enter the name or letter of the Alarm Center that you want to designate for reporting. If you are unsure of the available Alarm Center names, enter a question mark (*?*), and the Alarm Center Listing will be displayed on the screen. When you have finished examining the listing, press *<Return>* and you will be returned to the position that you left before you entered the question mark.

   When you have successfully entered a center name (or letter), the Alarm Center will be inserted in place of the existing Alarm Center, and the cursor and existing center will be repositioned into the next Alarm Center slot to the right.

4. Enter the letter or name of the next Alarm Center you wish to reference. You may enter as many as 72 Alarm Center references for a given calling time.

5. When you have completed entering Alarm Center references, press *<Esc>* to regain the status line.

   The cursor will then advance to the status line and display:

   > **Correct? (Y(es, N(o, T(hrow away entry)**

   Before responding to this prompt, take a look at the additions that have been made to the Call Time Schedule to be sure that the correct Alarm Centers have been set up for the time indicated.

If the schedule needs modification, then respond to the prompt with an **N**, followed by **<Return>**. This will reposition the cursor in the Calling Time List, allowing corrections to be made before the data is saved to the Calling Time File.

6. If the Calling Time List is correct, answer the **Correct?** prompt by typing **Y**, followed by **<Return>**.

Answering the prompt with a *Yes* will save the Alarm Center references and exit to the AlarmMAP Data Entry Options Menu. If you wish to establish additional weekday calling times, enter **N** to the prompt and continue to add times following the procedures as described above.

When entering times, note that it is not necessary to input the calling times in chronological order. AlarmMAP will insert them into the Calling Time Schedule in the proper chronological order.

To quit the editing session, enter **<Esc>** at the `Enter a time` prompt and you will be returned to the AlarmMAP Data Entry Options Menu.

Delete a Calling Time

When you wish to remove an existing Calling Time List from the Calling Time File you need to delete the time. By following the procedures outlined below, the calling time and its associated Alarm Center references will be completely removed from the AlarmMAP database.

Procedure:
1. Using the Editor Function Keys, move the cursor to the Call Time you wish to remove.

2. Once the cursor is on the time you wish to remove, press **<Ctrl D>**. With this entry, the program deletes the calling time and its associated Alarm Center references. The screen will then change to display the newly edited Weekday Call Times.

Note: This option does not have an "undo" feature. If a call time is mistakenly removed, you need to press **<Esc>** and select **T** to throw away the editing session.

Changing an Alarm Center Reference

An existing Alarm Center Call Time Schedule can be changed by either deleting an existing center reference, deleting an existing center reference and replacing it with a new center, or by inserting a new center reference in the Call Time Schedule. The Editor Function Keys, listed in Table 12-2, are used when deleting or inserting Alarm Center references.

KEY	DESCRIPTION
<Esc>	Return to previous menu
<Ctrl J>, <Return>	Move right one column
<Tab>, <right arrow>	
<Ctrl T>, <left arrow>	Move left one column
<Ctrl F>, <page down>	Scroll down one screen
<Ctrl R>, <page up>	Scroll up one screen
<Ctrl U>, <up arrow>	Move up one line
<Ctrl Y>, <down arrow>	Move down one line
<home>	Scroll up to the top
<end>	Scroll down to the bottom
<Ctrl A>	Add a new entry
<Ctrl D>	Delete an entry
<Ctrl L>	Clear and redraw the screen
<Ctrl Z>	See this help message

TABLE 12-2: HELP MENU

Deleting an Alarm Center Reference

To remove an Alarm Center reference from the Calling Time List, position the cursor over the Alarm Center name that you wish to delete, and press the *<Space Bar>* once to remove the name of a center. Complete the deletion by pressing *<Return>.* (Note that it is not necessary to use the space bar to delete the entire entry.) This will delete the selected Alarm Center from the schedule and move the remaining references one space to the left, filling the vacated center slots. The cursor will then advance to the next Alarm Center position in the schedule, and you can continue to make changes to the listing.

Inserting a New Alarm Center Reference

To insert a new Alarm Center reference, type the letter or name of the center you wish to add, and press *<Return>.* The new entry will be placed in the data position where the cursor is placed, and the existing center reference will be moved to the next reference position on the list.

If there are currently 72 center references in the Calling Time List, the editor will not allow you to insert a new reference. Because a maximum of 72 references are allowed in each Calling Time List, you must first delete a reference if you wish to add the new reference to the list.

Changing the Scheduled Call Time

If you wish to change the starting time of an entire Calling Time List, press *<Ctrl T>* to move the cursor back, until it is positioned over the beginning time of the listing. Type the desired starting time over the existing one, and press <Return>.

Quit the Weekday Call Time Menu

When you have finished editing the Calling Time File, press *<Esc>.* With this entry, the screen will return to the AlarmMAP Data Entry Options Menu.

SATURDAY AND SUNDAY CALL TIMES

Once you have established Alarm Centers, defined holidays, and entered weekday calling times, you will need to establish the weekend Calling Time Schedules. The AlarmMAP setup procedures are achieved by designating individual calling times and an alarm destination network for Saturday and Sunday.

The Saturday and Sunday Calling Time Files created are used for all weekend alarm distribution. This distribution is based on a 24 hour schedule that is in effect from 00:00 A.M. to 11:59 P.M. Saturday and 00:00 A.M. to 11:59 P.M. on Sunday.

Creating a Calling Time Schedule for Saturday and Sunday is accomplished by using Items #4 and #5 on the AlarmMAP Data Entry Options Menu. To establish this schedule, use the same editing procedures that were used to create the weekday Calling Time Schedule. While the Saturday and Sunday Calling Time Schedules are set up by using the same procedures that were used for the weekday schedule, the weekend schedule is set up by using different items on the AlarmMAP Data Entry Options Menu.

Notice that the only difference between defining these two Calling Time Schedules is that the Saturday and Sunday Calling Time Schedules are defined through different options on the AlarmMAP Data Entry Options Menu. The procedure below describes the steps for setting up Saturday call times. To set up Sunday call times, select Item 5 from the AlarmMAP Data Entry Options Menu.

Procedure:

1. From the AlarmMAP Data Entry Options Menu, select Item *4*, Saturday Call Times, and press *<Return>*.

   The Saturday Call Time Information Screen is presented, as shown in SCREEN 12-14. This screen is broken up into two different sections. The first section, the Call Time Menu, is listed on the first two lines of the screen. The second section, Calling Time Schedule, is the complete series of all the individual Calling Time Lists. Each Calling Time List shows the specific calling time and sequence of designated Alarm Centers which are to be contacted during that time period.

   Using the Editor Function Keys available through the Call Time Menu, a file is created which is used for all alarm distributions. The call distribution network is based on a 24 hour schedule that is in effect from midnight to midnight, each week of the year.

   Both the Saturday and Sunday Call Time Menus are identical in structure and in use to the Weekday Call Time Menu. A close look will reveal that the two menus list the same functions, and each menu option listed is operated in exactly the same manner. The only difference between the two menus is the time of the week that is affected by the Calling Time Schedules that are created. Because of this, if you can use the Weekday Call Time Menu, then you can use the two weekend Call Time Menus with equal ease.

```
Saturday Times: Keypad Field Control, <Esc> end screen, <Ctrl L> redraw screen,
              <Return> next field, <Ctrl Z> help


--------------------------------------------------------------------------------
00:00




--------------------------------------------------------------------------------
```

SCREEN 12-9: SATURDAY CALL TIME INFORMATION SCREEN

For a complete description of each of the menu items available through the Saturday and Sunday Call Time Menus, please reference the sub-sections listed earlier in this manual section which describe the corresponding operations under the Weekday Call Time Menu. Since the operations of both menu functions are the same, the only thing that will need to be done is to change any references in the text from weekday to Saturday or Sunday.

HOLIDAY CALL TIMES

As the name implies, the Holiday Calling Times option is used to designate an alarm distribution schedule for special days of the year. Unlike the weekday and Saturday and Sundays calling times (which are necessary in order for AlarmMAP to function on a day-to-day basis), establishing a Holiday Call Time Schedule is optional for the functioning of the program. However, if you have listed special days of the year in the Holiday List File, then you must set up the Holiday Calling Time Schedule for the distribution of alarms during these days. This calling schedule is in effect from 00:00 (12 o'clock midnight) to 11:59 P.M. on the dates specified in the Holiday List File.

Item #2 on the AlarmMAP Data Entry Options Menu, Dates of Holidays, is used to designate the specific dates of the year which are to be treated as holidays. If you plan to use the holiday feature of the AlarmMAP program, then you must create a list of holidays which are to be treated as special days by the alarm routing schedule.

After the holiday dates have been set up, you may then go into the sixth item on the AlarmMAP Data Entry Options Menu, Holiday Call Times, to establish a specific Calling Time Schedule for the holiday dates.

Upon selecting Holiday Call Times from the AlarmMAP Data Entry Options Menu, the Holiday Call Times Information Screen is presented. This screen is almost identical to the Weekday, Saturday, and Sunday Call Time Information Screens. The top two rows of the screen list the Holiday Call Time Menu, followed by the Holiday Call Time Schedule.

The Holiday Call Time Menu lists the same options that are available from the other two Call Time Menus. Accessing and operating each menu item is identical to the steps used to operate the options available on the Weekday Call Time Menu. Because of this, if you are familiar with the operations of the Weekday Call Time Menu, then using the Holiday Call Time Menu will present no problem.

For a full explanation of the steps needed to setup and edit the Holiday Calling Time Schedule, please refer to the instructions given for the menu functions found under the section titled Weekday Call Times. However, to be compatible with the holiday setup procedures, change all references in the text from Weekday to Holiday.

ALARM FILTERING

When AlarmMAP detects a Four Star Alarm, an Alarm Summary (or one of the other types of alarm reports) is sent to each center in the Calling Times List. During off-shift hours or on weekends and holidays, not all Four Star Alarms may need immediate response. For this reason, PressureMAP provides an Alarm Filtering feature that makes it possible for you to disable alarm distribution for ALL of the offices in the MAP System on specified days. For example, you can prevent alarms from being distributed during weekdays (you specify start and stop times), during weekends, holidays, and for temperature-related alarms.

The Alarm Filtering feature also gives you the ability to set individual threshold values for "One Report" Dispatch Alarms and Cleared Alarm Reports (see **Delivery Mode** and **Clear Mode** descriptions in this section). With these settings, if the number of alarms or cleared alarm reports generated for an office exceeds the threshold values entered, only one of each report type per office will be distributed.

Effective with Version 22, AlarmMAP also provides the option of having Three Star Alarms sent to Alarm Centers. These alarms will only be sent if Three Star Filtering is turned OFF. Please note that this option is completely independent of other alarm filtering options for time, dates and temperature. If three star alarming is enabled (i.e., not filtered), all three star alarms are sent out.

Filtered Alarm Conditions

> **Source/End Pipe PSI TD dropped 1 PSI or more in under 24 hours**—If the reading drops 2 PSI or more in under 24 hours, an alarm will be dispatched.

> **Pipe Panel flow increased 10 or more SCFH in under 24 hours**—If the flow increases 20 SCFH or more in under 24 hours, an alarm will be dispatched.

> **Manifold/Meter flow increased 3 or more SCFH in under 24 hours**—If the flow increases 5 or more SCFH in under 24 hours, an alarm will be generated.

> **UG Cable PSI TD dropped 1 or more PSI to 0 in under 24 hours**—If the reading drops 3 PSI or more in under 24 hours, an alarm will be dispatched.

These four alarm conditions can be filtered Monday through Friday during selected hours, on weekends between the hours of 00:00 AM Saturday and 11:59 PM Sunday, for all of the Holidays listed under the Dates of Holidays, and if the temperature suddenly drops below freezing.

Procedure:
1. From the AlarmMAP Data Entry Menu, select Item **7**, and press **<Return>**.

   The Alarm Filtering Information Screen is presented, as shown in Screen 12-14. This screen consists of three separate sections. The top two rows of the screen display the Alarm

Filtering Menu. This menu lists the various editor functions available when creating and editing the Alarm Filtering database. Below the menu display is the program status line, which will at first display the prompt:

```
        Change Alarm Filter Information?  Y[es]  N[o]
```

Below the Alarm Filtering Menu and accompanying status line is the Alarm Filtering Database. This portion of the screen lists the status of each Alarm Filtering Option as well as the threshold values selected for the One Report alarm distribution process. When accessing the Alarm Filtering Screen for the first time, all filtering options will be set to ON, with the exception of Temperature Filtering and Permanent Filtering.

Using the Editor Function Keys, you may move about the data record as needed to edit any field. TABLE 12-1, located near the beginning of this section, gives a brief explanation of the most widely used function keys. However, a complete description of the Editor Function Keys is given in the Preface located in Section 1 of this manual. Listed below are definitions of the various data fields that make up the Alarm Filtering Data Record.

Daily Filtering

This field sets the weekday filtering on or off. When set to ON (the default value), Alarm Filtering is activated Monday through Friday during the times selected. To change the setting of this field, move the cursor using the Editor Function Keys. When the cursor is on the current setting, type the word *OFF* or *ON* to establish the desired filtering selection. After inputting the function you want, press *<Return>* to accept the input and move to the next

Daily Start and Daily Stop

The next two fields control the time the weekday filtering is operating. The Daily Filtering can be set to operate Monday through Friday any time between 00:00 A.M. and 11:59 P.M. Both the Daily Start and Daily Stop fields are edited the same way. With the cursor positioned on the data field time to be changed, enter the time using the 24 hour time format. For example, 1:00 P.M. will be indicated by 13:00. The indicated minutes must be separated from the hour by a colon (:).

To enable Daily Alarm Filtering between the hours of 6:30 P.M. to 5:00 A.M. the next day, the Daily Start time is set to 18:30 and the Daily Stop time is set to 05:00.

Weekend Filtering

This field is used to enable Alarm Filtering for the hours between 00:00 A.M. Saturday morning and 11:59 P.M. Sunday night. To change the setting of this field, move the cursor using the Editor Function Keys. When the cursor is on the current setting, type the word *OFF* to disable Weekend Filtering or *ON* to turn the filtering back on. After inputting the function you want, press *<Return>* to accept the input and move to the next field.

Holiday Filtering

This field enables Alarm Filtering for Holidays listed under the Dates of Holidays menu option. For each date selected as a holiday, alarms are filtered from 00:00 A.M. to 11:59 P.M. To change the setting of this field, move the cursor using the Editor Function Keys. When the cursor is on the current setting, type the word *OFF* to disable Weekend Filtering or *ON* to turn the filtering back on. After inputting the function you want, press *<Return>* to accept the input and move to the next field.

```
Alarm Filtering: Keypad field Control, <Esc> end screen, <Ctrl L> redraw
screen,
          <Return> next field, <Backsp> delete char, <Ctrl B> previous field

 Change Alarm Filter Information? Y[es], N[o]
 --------------------------------------------------------------------------
 Daily Filtering:        ON      Daily Start:  00:00   Daily Stop:  00:00

 Weekend Filtering:      ON
 Holiday Filtering:      ON

 Temperature Filtering:  OFF

 Permanent Filtering:    OFF

 ONE REPORT regular alarm threshold: 1

 ONE REPORT cleared alarm threshold: 1

 Three Star Filtering: ON


 --------------------------------------------------------------------------
                                                      AlarmMAP  XX.XX.XX
```

SCREEN 12-10: ALARM FILTERING INFORMATION SCREEN

Temperature Filtering

This field is used to enable Alarm Filtering when the temperature is below freezing and there is a temperature drop of 20 degrees within a two-hour time period. Once this condition is met, the filter remains active for a period of 24 hours. An office must have a functioning temperature transducer to be included in this option.

To change the setting of this field, move the cursor using the Editor Function Keys. When the cursor is on the current setting, type the word **ON** to enable Temperature Filtering or **OFF** to turn the filtering off. After inputting the function you want, press **<Return>** to accept the input and move to the next field.

Permanent Filtering

This field enables Alarm Filtering for the alarms listed at the beginning of this section to be filtered continuously, every day of the week. To change the setting of this field, move the cursor using the Editor Function Keys. When the cursor is on the current setting, type the word **ON** to enable Permanent Filtering or **OFF** to turn the filtering off. After inputting the function you want, press **<Return>** to accept the input and move to the next field.

ONE REPORT Regular Alarm Threshold

The entry in this data field indicates the maximum number of Dispatch Alarms that will be distributed sequentially to each Alarm Center in the Calling Times database before a single Dispatch Alarm Report is sent. (See SCREEN 12-7.) If the number of alarms generated in an office exceeds the threshold value entered, AlarmMAP will send only one report to the specified Alarm Centers. For example, if the threshold value is three, only one report will be sent to the Alarm Center if the number of created alarms is four or greater. To enter or change an existing value, position the cursor in the data field, enter the desired threshold number, and press <Return>.

ONE REPORT Cleared Alarm Threshold

    Like the Regular Alarm Threshold described above, this data field specifies the threshold for determining when a single Cleared Dispatch Alarm will be sent to the specified Alarm Centers. The threshold value can be added by moving the cursor to this data field, typing the desired threshold value, and entering a *<Return>*.

Three Star Filtering

    This field enables Three Star Alarms to be filtered continuously, every day of the week. The default value for this field is ON, preventing three star alarms from being sent to Alarm Centers. Note that Three Star Filtering operates independently of the filtering options for time, dates and temperature described above. Changing the value in this field to OFF causes **all** three star alarms to be sent to Alarm Centers.

Completing the Alarm Filtering Data Record

Once all the changes for the data fields have been completed, press *<Esc>* to return to the status line. When you return to the status line, AlarmMAP will issue the message:

```
Correct?  Y(es), N(o), T(hrow away changes)
```

This message is asking you to double check the data which you have entered into the Alarm Filtering Data Record. If, after looking over the information entered, you decide that the data is correct, then answer *Yes* to confirm the entry.

2.   Return to the status line and press **Y** to save the Alarm Filtering information. Complete the entry by pressing *<Return>*.

    If the data which you have input is not correct, answer the **Correct?** message with N. This response will indicate to AlarmMAP that you are not satisfied with the Alarm Filtering Data Record, and that you need to edit some of the information entered. If you press **N** and *<Return>*, the cursor will be returned to the Alarm Filtering Data Record, where you can use the Editor Function Keys to move to the desired data fields and make corrections to the data entered. Again, once you have finished with the data record, return to the status line **Correct?** by pressing *<Esc>* (or press *<Return>* from the *Permanent Filtering* data field).

    If the record you have entered contains several errors, it may be best to start over with a clean slate. If this is the case, then answer the **Correct?** prompt with a **T**, followed by *<Return>*. From here, you may re-enter the Alarm Filtering Data Record from scratch.

ALARM CONSISTENCY CHECKS

This option of the AlarmMAP Menu allows you to view the current status of Alarm Center reporting. The screen generated by this option lists the Call Times and PressureMAP offices that are currently **NOT** in the AlarmMAP database for a given time or day of the week (SCREEN 12-16). It can be used to quickly verify the completeness of AlarmMAP Data Entry by listing any office that is: 1) not monitored by AlarmMAP for a certain time period, or 2) unable to distribute alarms during an established calling time.

In the example below, the first two messages indicate that no Saturday or Sunday call times have been entered into the AlarmMAP database. Because of this, no alarms will be sent to any Alarm Center during the weekend. The third and fourth messages indicate that two PressureMAP offices

are not entered into the AlarmMAP database, and so no alarms for these two offices will be sent to any Alarm Center.

```
Alarm Consistency Check  Keystrokes: [Quit <Esc>] [Down 'J'] [Up 'K'] [Help 'H']
              [Print 'P'] [Search Forward 'F'] [Search Back 'B'] [Search Next 'N']


 --------------------------------------------------------------------------
No AlarmMAP Saturday Call Times, ALL offices unmonitored
No AlarmMAP Sunday Call Times, ALL offices unmonitored

Weekdays 04:44  WALDON unmonitored by AlarmMAP for 24 hrs
Weekdays 03:55  RUSTWORTH unmonitored by AlarmMAP for 24 hrs
```

SCREEN 12-11: ALARM CONSISTENCY CHECK SCREEN

QUIT AlarmMAP DATA ENTRY

The last item on the AlarmMAP Data Entry Options Menu is the Quit AlarmMAP Data Entry option. This menu option, when selected, will exit the Data Entry Menu and close the AlarmMAP database files.

Procedure:

1. To exit the AlarmMAP Data Entry Options Menu, select Q, the last menu option. Follow your selection with ***<Return>***.

    When the Quit option is selected, you will be returned to the MAP Data Entry Menu. If you have completed your session with the MAP System of software, then follow the procedures below to correctly logout of the system.

2. From the MAP Data Entry Menu, select Item ***Q*** to access the System Options Menu. The last step when exiting the system is to logout from the System Options Menu.

3. To log out of the MAP System, select ***Q*** (Quit) from the System Options Menu.