ALARMMAP

INTRODUCTION

AlarmMAP is a multi-functional software program that extends the monitoring capabilities of PressureMAP by providing a 24-hour "around the clock" security system. Working hand-in-hand with PressureMAP and its office and device databases, AlarmMAP calls each wire center in the MAP System every two hours to access device data. While AlarmMAP is interrogating the pressurization system for potential threatening conditions, incoming calls from the various office Cable Pressurization Automatic Monitoring Systems (CPAMS) are answered and inspected for possible trouble conditions. This surveillance amounts to a two-fold protection system—AlarmMAP initiates calls to monitor the cable pressurization system, and it answers the CPAMS hot line.

Once device data is acquired, it is analyzed to determine the possibility of a severe alarm condition. If a system-threatening condition is found, AlarmMAP initiates a second reading for the device to confirm that the condition qualifies as an alarm. If it does, an alarm is generated and distributed to the Alarm Centers that have been set up to receive alarm notification during the specified calling time. By default, AlarmMAP will distribute an "Alarm Summary" report to each center. This report includes the Task #, Device #, Condition and Level of the device in alarm. Also included in the alarm distribution are any "System 0" conditions that may have been detected. These system-wide errors pertain to problems with the office monitor and/or communications equipment itself.

Other report options are also available for selection, depending upon the specified alarm delivery location and method (e.g. console, IP address, modem, email, etc.) and individual user preference. For example, instead of an Alarm Summary, the Alarm Center can be set up to receive a Full Report. This report includes detailed task information and a leak schematic, which depicts the approximate location of the condition causing the alarm relative to the devices around it. Another report option, called "One Report," is the result of Alarm Masking. When a single situation causes alarm conditions at multiple devices, the MAP software will send an alarm only for the device nearest to the problem.

AlarmMAP processes alarm data for all of the offices in the system (up to 250 wire centers for PressureMAP and 1250 wire centers for PressureMAP Server). From the device data gathered, alarm information is distributed to a maximum of 72 user-designated Alarm Centers. Only those centers that have been set up to receive alarms on the day and time period during which an alarm is generated will be called. Each center on the calling list will receive an Alarm Summary or other designated report, assuming communications can be established. If communications cannot be established initially with a center, AlarmMAP will attempt to call the center repeatedly until the call succeeds or until a defined maximum number of attempts has been made. The default maximum number of delivery attempts is five, although this number can be changed by System Studies' Technical Support Personnel for each PressureMAP System using the capabilities editor.

To summarize, AlarmMAP performs six vital functions:

1) It calls each office in the MAP database every two hours to acquire readings from all the monitoring devices in the office.

2) It accepts incoming device data from each Cable Pressurization Automatic Monitoring System (CPAMS) in the system.

3) It determines alarm severity based on PressureMAP's Dispatch Priorities criteria.

In earlier PressureMAP versions only Four Star Alarms conditions were considered for dispatching by AlarmMAP; however, users now have the option of directing AlarmMAP to report Three Star Alarms. Please note that the filtering options for Four Star Alarm distribution do not apply to Three Star Alarms. Detailed information about this option is provided in the AlarmMAP section of the *MAP System Data Entry Manual*.

4) In the event of a CPAMS catastrophe, AlarmMAP filters out the related alarms, and sends out only those Four Star Alarms that are the source of the catastrophe.

5) It distributes Four Star, Three Star (if specified) and Cleared Alarm information to user-designated alarm centers and/or remote terminals.

6) It creates an audit trail for all dispatches.

ALARM DISPATCHING

In the past AlarmMAP's sendalarm function was more time consuming and less efficient than the one implemented beginning with PressureMAP Version 26 and PressureMAP Server 1.00. It performed alarm analysis and distribution linearly, office by office in a singular, sequential fashion. The sequence of Alarm Centers that was set up in the Call Times list was very important, depending upon the acknowledgment mode specified. For example, if an alarm was acknowledged by someone at a center (or set up for Auto-Acknowledgment), alarm distribution would stop. For this reason, if a user wanted multiple centers to receive alarms, AlarmMAP would have to call each center in the order specified and deliver the alarm information before it called the center that was designated to acknowledge the alarm.

No longer is the position of the Alarm Centers in the call time list important. Success or failure in delivering an alarm to one center has no effect on any other center's delivery status. The new method utilizes a process manager or master executable to spawn an agent executable for every center that requires alarm notification. The result is that many concurrent alarm notification functions can take place, if necessary, instead of a single alarm distribution/acknowledgment process.

In PressureMAP Version 26, AlarmMAP was further modified to eliminate the need to acknowledge alarms. The old method of acknowledging alarms worked well initially, when the maximum number of offices that PressureMAP could monitor was 72. It became much less efficient, however, when PressureMAP office monitoring limits were raised to 250 starting with PressureMAP Version 22. Now, with PressureMAP Server's greatly expanded monitoring capacity, the original sendlarm process is both inefficient and impractical. Users can now specify the number of attempts that AlarmMAP will make to distribute alarms to a center (by default, the value is five). If the agent executable cannot connect with the alarm center during the first attempt, it will try repeatedly until the alarm can be sent or the maximum number of attempts has been made.

Distribution Method

When a Four Star Alarm is detected by AlarmMAP during its round of calls or in response to a CPAMS-generated alert, the software follows up with a confirmation call to determine if an actual alarm condition exists. If alarm condition can be confirmed, AlarmMAP spawns the agent executables which, in turn, call the Alarm Centers designated in the current Calling Time List. An audible signal will be produced by the speaker located within the remote terminal when an alarm arrives at a remote location. After this signal is sent, the Alarm Summary or other user-specified alarm report will be displayed on the terminal screen or output to a hardcopy (if the designated location is a printer). The Alarm Summary consists of a Task

Number, the number of the device that signaled the alarm, the actual Alarm Condition, and the Alarm Priority Level (see SCREEN 3-1).

```
Dispatch Alarms for <OFFICE NAME>                       AlarmMAP XX.XX.XX
07/05/2008  17:35                             System Studies Incorporated
-------------------------------------------------------------------------------

Task #    Device #    Condition                                      Level
-------   ----------  ---------------------------------------------  -----
18720B6   T -006      UG Cable PTD lost  4.0 psi in < 24 hr          ****
                                                                     ALRM
```

SCREEN 3-1: ALARM SUMMARY

Beginning with PressureMAP Version 27, when alarms for a given office are delivered to an Alarm Center, any System Alarms that have occurred are sent as well. For printers designated as Alarm Centers, the System Error(s) will display below the device-specific Alarm Summary information (Screen 3-2). For email and other types of socket-related alarm delivery, system errors will be sent as a separate Alarm Summary report (Screen 3-3). Both types of system error Alarm Summaries include an *Error #* in place of the *Device #*.

Additional information pertaining to many of the System 0 error numbers is included in Appendix 3 of this manual.

```
Dispatch Alarms for <OFFICE NAME>                       AlarmMAP XX.XX.XX
7/5/2008  17:35          *Schedule Off*       System Studies Incorporated
-------------------------------------------------------------------------------

Task #    Device #    Condition                                      Level
-------   ----------  ---------------------------------------------  -----
1870009   001-01      Contact Alarm at alarm or error (ALRM) in < 24 hr  ****
                                                                     ALRM
187000A   001-02      UG Cable PTD lost  8.0 kPa to 0 in < 24 hr     ****
                                                                     ALRM

Task #   Error #   Condition                                        Level
------   -------   ---------------------------------------------    -----
1870001    375     Can't connect to socket (TEST)                   ****
                                                                     ALRM
                         ----- Dispatch Alarms -----
```

SCREEN 3-2: ALARM SUMMARY (WITH SYSTEM ERROR INFORMATION)

```
 Dispatch Alarms for <SYSTEM>                        AlarmMAP XX.XX.XX
 07/05/2008  17:35                           System Studies Incorporated
 ------------------------------------------------------------------------

 Task #  Error #  Condition                                         Level
 ------  -------  ------------------------------------------------- -----
 1870001   375    Can't connect to socket (TEST)                    ****
                                                                    ALRM

                      ----- Dispatch Alarms -----
```

SCREEN 3-3: SYSTEM ERROR ALARM SUMMARY

The Alarm Summary begins with the Task Number of the associated dispatch. This unique seven-character dual purpose identifier utilizes the leading three digits to represent the current Julian date (which is a numeric representation of the calendar date, where Jan 1 = 001). The four alphanumeric characters listed after the Julian date represent a hexadecimal base 16 sequential order number assigned by the system. In software versions prior to PressureMAP Version 26 and PressureMAP Server 1.00, sequential decimal numbers were used after the Julian date to represent one of a possible 9,999 task numbers. With the new hexadecimal task numbering, up to 65,535 unique task numbers, represented by hexadecimal value FFFF, can be assigned. (Please refer to the Glossary section of this manual for more information on hexadecimal base 16 numbering.)

The Task Number is followed by either a Device Number or Error Number. The Device Number identifies the monitoring device that signaled the alarm. For some types of monitors, it is a letter/number identifier that references either a transducer, contactor, contact alarm, or volume counter. The Error Number is a simple reference number that corresponds to one of several possible system errors.

Dispatches and device reading problems are identified and defined in the **Condition** column of the report. Depending upon the type of monitoring device causing the dispatch, the **Condition** column may also provide one or more of the following:

- The exact decrease or increase in pressure or flow, measured in Pounds per Square Inch (PSI) or Standard Cubic Feet per Hour (SCFH)

- Indications of device reading problems (i.e., BUSY, OPEN, etc.)

- An indication of a contactor in an alarm state

The last column of the Dispatch Report shows the priority level of the dispatch. With AlarmMAP, the priority level will always be 4 stars (unless Three Star Alarming has been enabled through data entry). The AlarmMAP program is designed to focus on system-threatening Four Star Alarms.

For conditions that generate multiple alarms, the software distributes the alarm that will provide the technician with the most effective information for locating the source of the problem (as shown in the following table). For a cable leak, monitoring device alarms are prioritized as follows: 1) Manifold Flow device (MF), 2) End Point pipe pressure device (EP), and 3) Source Flow device (SF). However, for a pipe leak the prioritization is opposite—the End Point pipe pressure device and the Source Flow device are the best indicators.

The first column in the table lists four types of conditions that are likely to generate multiple alarms. The next four columns show the reading behavior of different device types for each condition.

Condition	MF (flow)	SF (flow)	SP (pressure)	EP (pressure)
Cable Leak: **MF** masks **EP** and **SF**	>	– , >	– , <	– , <
Small Pipe Leak: **EP** could mask **SF**	<	<	– , <	– , <
Large Pipe Leak: **EP** masks **SF**	<	>	– , <	< (3 PSI or more)
Manifold Turned Off: use **MF**	< to 0	– , <	– , >	– , >

> represents an increase.   < represents a decrease.   – represents little or no change.

Detailed Task Report

After receiving the Alarm Summary, you can obtain a full Detailed Task Report for the device in alarm by accessing the Dispatch Priorities option of the Master Menu for the office and typing the task number at the *Task Dispatching for which Task #?* prompt. Or, if you prefer to receive this detailed information with each alarm, you may specify that a Full Report be sent to an Alarm Center using the AlarmMAP Data Entry Editor. REPORT 3-1 displays an example Detailed Task Report, which consists of the following data:

Specific Device Information

> Specific Device Information provides a detailed description of the dispatch condition. This information contains a listing of the probable cause of the leak, the procedure and Worksheet Number to use for locating the leak, and detailed device information and readings. (For additional information on Detailed Task Reports, please refer to the sub-section titled "Analyzing the Detailed Task Report" located in Section 2 of this manual.)

Associated Task Information

> If the immediate devices on either side of the alarmed device have changed as a result of the alarm condition, Specific Device Information will also be provided for those devices affected by the dispatch condition.

```
Task Dispatching Info for APTOS, T -006              AlarmMAP XX.XX.XX
07/05/2008  17:35                              System Studies Incorporated
------------------------------------------------------------------------------

Task #   Device #   Condition                                          Level
-------  ---------- -------------------------------------------------- -----
187026A  T -006     UG Cable PTD lost  4.0 psi in < 24 hr               ****
                    Reading was 1.0 psi at 17:35 on 07/05/05  VALIDATED
Task Dispatch Procedure #1


Probable Cause:  Cable Leak, Bad/Stuck Device, Pair Trouble.
Procedure:  Use Worksheet D to Determine Area of Search / Locate Trouble.

Device #:  T -006                             Type:  UP

Address:   MH-58, RIO DEL MAR BLVD            Loc:   7 Pipe:      B
Sheath(s): 05

Cable:        14   Prim Pair:    103   Sec Pair:         Sort Key:
Plat #:     B-29   Stickmap:       3   Unit #:        1  Line #:       6
Module:      DED   Input #:        4   Threshold:     2

Remarks:

Readings   Curr Last Tdy  -1   -2   -3   -4   -5   -6  Wk-1 Wk-2 Wk-3 Wk-4
---------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
            1.0  5.0  5.0  5.0  5.0  5.0  5.0  5.0  5.0  4.9  5.0  5.1  5.1


===============================================================================
ASSOCIATED DEVICES TOWARD THE OFFICE
===============================================================================

Device #:  T -010                           Type:  MF  Range: 20.0  OAU:   4.0
Address:   MH-48                             Loc:   6 Pipe:      B
Sheath(s): 05     07

Readings   Curr Last Tdy  -1   -2   -3   -4   -5   -6  Wk-1 Wk-2 Wk-3 Wk-4
---------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
Calculated: 5.0  3.5  3.5  3.5  3.5  3.5  3.5  3.5  3.5  3.5  3.5  3.5  3.5

************************** PROJECTED LEAK LOCATION ************************
*                                                                        *
*                             LOC    7                                   *
*       <- OFFICE          MH-58, RIO DEL MAR BLVD         FIELD ->       *
*                          TD T -006     TYPE UP                         *
*   MH-48                          1.0 PSI                               *
*                                                                        *
*<   6>--------------------[  LEAK  ] |                                  *
*           <- 2.7KF ->            \  |                                  *
*                                   \ |                                  *
*                                    \|                                  *
*                                     |                                  *
*                                                                        *
*************************************************************************
```

REPORT 3-1: DETAILED TASK REPORT

Projected Leak Location

In addition to the task information supplied with each Four Star Alarm, AlarmMAP also provides a schematic drawing of the leak's approximate location. Included on the leak schematic is the following information:

- Device number (of the alarmed device)
- Utility hole or device location
- Device type (PressureMAP device code)
- Pressure or flow reading
- Distance (in kilofeet) between associated devices and the alarmed device

- Office and field directions
- Approximate leak location, relative to associated devices

Although the leak schematic is not intended to pinpoint the exact location of the leak, it does serve to provide a visual indication of the leak's probable position relative to the devices surrounding it. With the help of the schematic, the area of search can be reduced to a particular section of the pressurization system.

The location of the leak, as specified on the report, is based upon:

- Pressure and flow data received from the CPAMS monitor

- Information entered into the PressureMAP database

The accuracy of the indicated leak location is directly related to the accuracy of the data contained in the PressureMAP database. Because of this, it is crucial that the data entered into PressureMAP correctly reflects the setup of the pressurization system. (Detailed information on preparing the PressureMAP database can be found in the MAP System Data Entry Manual.)

RECEIVING ALARMS ON ALPHANUMERIC PAGERS

When an alphanumeric pager is designated as an Alarm Center, the output of the alarm is condensed to fit the pager's limited display space, which is typically 4 lines by 20 characters. Because only the essential alarm information is sent, you should log into the MAP System to see the complete Alarm Information Report before proceeding to the alarm location. The alarm information sent to the pager includes the office name, task number and any related cable activity information, device number, device type, device reading and dispatch condition. REPORT 3-2 shows possible Alarm Dispatches received on an alphanumeric pager with a 4 line by 20 character display screen, and REPORT 3-3 contains an example of a Cleared Alarm display.

```
    DISPLAY                     DESCRIPTION

    CULVER CITY                 Office name
    Alarm 2770100               Task number
    001-01 UP @ 1.0             Device number/type/reading
    Lost 4.0 psi                Dispatch condition

    or

    CULVER CITY                 Office name
    Alarm 2770100(CONS)         Task number (Activity)
    001-01 UP @ 1.0             Device number/type/reading
    Lost 4.0 psi                Dispatch condition
```

REPORT 3-2: POSSIBLE ALPHANUMERIC PAGER ALARM REPORTS

```
DISPLAY                 DESCRIPTION

CULVER CITY             Office name
Alarm 2770310           Task number
001-01 UP               Device number/type
Cleared                 Current status
```

REPORT 3-3: POSSIBLE ALPHANUMERIC PAGER CLEARED ALARM DISPLAY

RECEIVING ALARMS VIA EMAIL

Starting with Version 24, AlarmMAP provides a choice of two formats for alarms sent via email. The original MAIL alarm center option sends alarms via a LAN (Local Area Network) to the mailbox of a user on the LAN. The newer BRIEF REPORT allows alarms to be sent to pagers that accept email. These options are especially helpful for users who are responsible for multiple systems, as both alarm formats display the number of the system in which each alarm originated.

Brief Report

The MAIL alarm format is similar to the Alarm Summary shown in SCREEN 3-1, but the alarm report is preceded by a brief alarm data "header" that includes the system number and name. When the BRIEF REPORT email alarm option is used, the alarm report information is abbreviated to fit the pager screen display (see REPORT 3-4). Notice that the office name and system number appear in the Subject line. To accommodate the special formatting by some pager companies, the office name is also displayed in the main body of the alarm below the Subject line. In the example below, the office name is "Hasalarms" and the system number is 3366.

```
Subject: PMAP ALARM- HASALARMS [3366]

Office: HASALARMS
PMAP Device:  001-01
PMAP Reading:  2.2 psi
PMAP Task #:  2070103
Lost  4.4 psi
----- Dispatch Alarm NOT Auto-Ack'd -----
```

REPORT 3-4: BRIEF REPORT ALARM (EMAIL FOR PAGER DISPLAY)

Condensed Report

Beginning with Version 26, alphanumeric pagers can also receive emailed notification for multiple alarms in a single report (REPORT 3-5). The format of this report is similar to the Brief Report described above, but its content is much different. Rather than provide device number, reading and task number information, it identifies the PressureMAP System number, the office designation, the number of alarms generated, and a message requesting that you refer to the PressureMAP System to obtain more details about the alarms.

Please note that in order to receive Condensed Reports on your pager, you will first need to set the One Report Regular Alarm Threshold in the AlarmMAP editor. (See "Alarm Filtering" in the AlarmMAP Data Entry section of the *MAP System Data Entry Manual*.) This filter identifies how many alarms must be generated in an office before the Condensed Report is emailed. A similar type of Condensed Report is also provided for cleared alarms.

```
Subject: PMAP ALARM- HASALARMS [3366]

PMAP System: 3366
PMAP Office: HASALARMS
PMAP Alarms: 4
Consult the MAP System for Details
----- Dispatch Alarm -----
```

REPORT 3-5: CONDENSED REPORT ALARM (EMAIL FOR PAGER DISPLAY)

DISPATCH ALARM CLEARING NOTIFICATION

When a Dispatch Alarm clears, AlarmMAP has the ability to notify any or all of the Alarm Centers designated in the current Calling Time List if an alarm format has been selected for the **Clear mode** data field. By default, this data field is set for NOT DELIVERED, indicating that no alarm clearing notification will be sent. During the data entry process, it is possible to select one of the following types of alarm clearing notification: Full Report, Summary Report, One Report or Brief Report (for email delivery). For additional information about setting Alarm Clearing notification, refer to the AlarmMAP section of the *MAP System Data Entry Manual*.

DISPATCH ALARMS vs. DISPATCH PRIORITIES

An Alarm Summary sent out by AlarmMAP is similar to the Dispatch Reports generated through the PressureMAP Dispatch Priorities program option. However, while the two reports are similar in appearance and content, there is a difference between the two.

Every two hours, AlarmMAP calls each office in the PressureMAP system and acquires device readings for all the devices located in each office. As AlarmMAP acquires this data, it updates the Office History Files for each office, placing the latest device readings into the **Curr** data field for each respective device. The values that were previously contained in the **Curr** data field are moved into the **Last** data field in the History Files, so that each History File will contain the current and last device readings made.

After the device data is obtained from each office, AlarmMAP compares the time and date of each Office History File with the date of the corresponding Office Dispatch File. If the History File's date is more recent than that of the Dispatch File, then a new Dispatch File is created. When this occurs, the MAP System examines the devices contained in the History File, looking for conditions which indicate a system-threatening Four Star Alarm.

As AlarmMAP looks at each device in an Office History File, it compares the **Curr** data field with both the **Last** data field and the **Tdy** data field. (The **Tdy** data field contains the value of the device which was obtained by PressureMAP during its nightly calling cycle.) If either of these two comparisons yields a condition which is determined to be system-threatening, then AlarmMAP compiles an Alarm Summary and sends it out to the Alarm Centers in the order indicated by the active Calling Time List.

This process is slightly different from the procedure that PressureMAP follows when it develops its daily Dispatch Reports. Much like AlarmMAP, PressureMAP calls each office in the system and obtains the current readings for every device programmed into the CPAMS. However, PressureMAP only calls the offices on the system once each day, beginning at 2:00 a.m. Then, after creating a new Office History File for each office on the system, PressureMAP creates a new Dispatch File for each office. This file is composed of all aged dispatches and any new dispatch conditions that are detected. (For details concerning aged dispatches and PressureMAP Priority Ratings, please refer to the Operations Manual,

Section 2.) New PressureMAP dispatches are derived by comparing the `Tdy` device data field readings with the values that are stored in the `-1`, `-2`, and `-3` data fields of the Office History Files.

Because of the difference in the way PressureMAP and AlarmMAP create their dispatches, different terminology is used in the dispatch condition messages. With AlarmMAP, all Four Star Alarms will have been detected within the last 24 hours. Because of this, all dispatch condition messages produced by AlarmMAP contain the phrase:

        ... in < 24 hr

In contrast to this, dispatch condition messages produced by PressureMAP make use of the phrase:

        ... in <NUMBER> hr

With the PressureMAP messages, the number of hours will always be 24, 48, or 72. This is because PressureMAP compares the current device data with the device data obtained one day prior, two days prior, or three days prior to the reading contained in the `Tdy` data field.

Task Numbers and Dispatch Dates

When reviewing PressureMAP dispatches, one thing you may notice is that a Task Number of a new dispatch may not match the calendar date of the Dispatch Report. The tipoff to this is the first three digits of the Task Number, which represent the creation date of the dispatch, shown in a Julian date format.

When a dispatch is created, whether it be by PressureMAP or AlarmMAP, the first three digits of the Task Number will always indicate the date that the condition was found. However, it is important to notice that if AlarmMAP generates a dispatch which is not cleared by the end of the day, that same dispatch condition will be picked up by PressureMAP on the following morning. In doing so, PressureMAP generates a new dispatch condition (to fulfill the PressureMAP Dispatch Priorities criteria), but a new Task Number is NOT given to the dispatch. In this case, the Task Number reflects a Julian date that is one day older than the date of the PressureMAP Dispatch Report. In addition, PressureMAP does not age the dispatch; it retains the full Four Star priority rating. Because of this, the dispatch looks like it is new, but the Task Number indicates that it is one day old.

This may at first appear to be an inconsistency within the system. Normally, a day-old Four Star dispatch will have an aged rating of:

        -***

However, PressureMAP treats any dispatch produced by AlarmMAP as a new dispatch condition and gives these dispatches an unaged Four Star priority rating, even though the trouble was spotted on the previous day.

High Priority ($) Device Types

With the PressureMAP software, any device can be designated a "high priority" ($) device. A dispatch condition on a $ device will result in a higher priority dispatch than a similar condition on a device that is not high priority. Alarm thresholds for $ devices are set by the user during data entry. For $ pressure and flow devices, for example, there are two special data fields. Both device types require an entry in the `CHNG` field and also in either the `SAU` (flow devices) or `STD` (pressure devices) data fields. To determine if a $ device is in an alarm condition, the MAP software refers to the value entered into the `CHNG` field of

the device data screen. The **CHNG** value indicates the amount the flow can increase from the TODAY reading before the device goes into alarm. **STD** and **SAU** values are user-defined standards for the $ devices from which PressureMAP generates static Two Star dispatches. In addition, a $ device will generate a four star alarm for a verbose (non-valid) error reading.

Beginning in PressureMAP Version 26, alarm distribution of a $ device alarms occurs every two hours until the alarm clears. In the past $ device alarms were sent to designated alarm centers only once, but the device readings and corresponding condition column explanations would continue to be updated with new reading information until the alarm cleared. Now, with critical alarm information being regenerated and redistributed every two hours, alarm center personnel will be notified without fail of priority device alarms even if conditions do not worsen.

RECEIVING ALARMS FROM CPAMS MONITORS

As mentioned previously, AlarmMAP will call each CPAMS monitor in the pressurization system every two hours to check for alarms. However, certain CPAMS monitors are fully capable of contacting AlarmMAP when they have detected a condition which is interpreted to be system threatening.

Almost all CPAMS monitors have the capability to detect system threatening conditions, and send reports based on the conditions found. AlarmMAP is capable of capturing these reports and processing them as soon as they arrive. If, after inspecting the device data sent by the CPAMS monitor, AlarmMAP finds that a condition is system threatening, then AlarmMAP will issue a Four Star Alarm and send out Alarm Summaries to the centers listed in the active Calling Time Schedule.

When AlarmMAP is installed, a special dedicated modem is set up solely for the purpose of receiving reports issued by the CPAMS monitors. The only job of this modem is to receive calls from the CPAMS equipment. Therefore, if a monitor does detect trouble, the modem should be free to answer the call. When a call comes through to AlarmMAP, the monitoring device information contained in the report will be placed in the respective Office History File of the MAP System. This new device information will update the **Curr** column in the History File. When an Office History File is updated, the time stamp on the file will also be changed to reflect the time of the latest file update.

As AlarmMAP goes through its processing, one of its tasks is to check the date of the Office Dispatch File against the date of the corresponding Office History File. If the History File date is more current than the Dispatch File date, then AlarmMAP knows that it needs to develop a new Dispatch File so that it will be current with the History File. If it is determined that the Dispatch File needs updating, AlarmMAP will compare the new device data in the History File with the MAP alarm criteria. If a system threatening Four Star Alarm is found, AlarmMAP will send the Alarm Summary to the Alarm Centers listed in the currently active Calling Time List.

It is important to note that a CPAMS monitor may issue an alarm report for a condition that the MAP System does not consider to be a Four Star Alarm. In this case, AlarmMAP will not send out Alarm Summaries because the condition found is not considered, by MAP standards, to be serious enough to warrant a Four Star Alarm. As a result, AlarmMAP helps to filter out "nuisance" type alarms sent from CPAMS monitors, acting upon only those situations that need prompt attention. A special option in the AlarmMAP Data Entry menu, Alarm Filtering, will set up a PressureMAP system-wide filter for various alarm conditions. This menu option also provides the capability for allowing Three Star Alarms to be sent to Alarm Centers. For more information about this option, and complete data entry instructions, refer to the Alarm Filtering section in AlarmMAP Data Entry.

Notice, however, that the problem condition which caused the CPAMS monitor to send a report will be retained in the History File device data. Thus, if a less critical condition exists in the system (anything less than a Four Star Alarm), it will be picked up the following morning as PressureMAP makes its calls and develops its daily dispatches. As a result, the condition which caused the CPAMS to send a report will not be overlooked. It will be noted in the regular Dispatch Report, issued by PressureMAP each morning.

Programming CPAMS Monitors for AlarmMAP

Before AlarmMAP can receive reports from the various CPAMS monitors, these monitors must be programmed to comply with certain AlarmMAP requirements. Very basically, a CPAMS monitor is compatible with AlarmMAP when the **office name of the CPAMS monitor** can be matched against an **office name in the list of PressureMAP offices**. If no office name match can be found, then AlarmMAP will not know which CPAMS monitor is sending the device report and will treat that device as a bad alarm and place it in an UNKNOWN.ERR file.

With Chatlos/Hercules systems, the compatibility requirements partly depend on the type of monitor. First, the monitor name MUST exactly match the name of the PressureMAP office name, as stored in the PressureMAP office database. This includes spaces and punctuation. Then, the ALARMS mode in the monitor must be programmed for the appropriate monitor type in order for PressureMAP to work.

With Sparton systems, meeting the name compatibility requirement is slightly more involved. This is because a single Sparton system may represent a number of separate PressureMAP offices. (For more information on the unit structure of Sparton systems, please refer to Section 3 of the MAP System Data Entry Manual, entitled "Programming a Sparton CPAMS.") With Sparton systems, the unit name of EACH individual unit must match the PressureMAP office name which the unit represents. When programming Sparton units, it is important that all units within the Sparton be given the name of the PressureMAP office that they represent, even if more than one unit monitors the same PressureMAP office.

DISPATCH HISTORIES

The Dispatch Histories function of AlarmMAP creates an audit trail for all dispatches. The two primary purposes of this function are to keep track of how the PressureMAP system is performing, and to make the report centers accountable for alarms received. Dispatch Histories is particularly useful in generating accountability as it leaves no question about where the alarms were dispatched or who acknowledged them. The function is also useful when a particular device is suspected of being faulty, as a list of all dispatches related to that device can be generated.

The Dispatch Histories function enables the PressureMAP user to look up a record of dispatch activity related to a particular task number, device number, pipe route, PressureMAP location number, and dispatch log entry type. The program will search for dispatches and then assemble a list of all alarms associated with any of the characteristics listed above. Through Dispatch Histories, the PressureMAP user can trace the history of a particular alarm to reveal whether it was dispatched to the correct report centers, whether it was acknowledged and by whom, whether the problem was corrected or whether the dispatch was aged according to the PressureMAP aging system.

For example, it will produce a list of all dispatches on equipment in a particular Central Office, or on a particular pipe route, or at a PressureMAP Location Code. It will also create a chronological listing of all dispatches issued with a particular task number. This historical listing of dispatches related to a particular task number will reveal when and why the original dispatch was created, when it was aged or changed, whether it was filtered, acknowledged, sent to an alarm center, or cleared.

The reports generated by this function can be limited to a particular time frame. The time frame (window for the search) has two variables: time of day and dates. The search can be limited to certain hours of the day, for instance from 7:00 to 17:00 every day. The window for the search can also be limited to particular days, or a range of days, going back 60 days.

Finding the Dispatch Histories Menu

Before you can begin working with Dispatch Histories, you must bring the Dispatch Histories Menu to your screen. This procedure explains how to do that. Where you start in this procedure depends upon where you enter the MAP System. If you log in at the System Options menu, begin this procedure at Step #1. Note that if you pause too long during the entry process, the Time Default function may back you out through the menus until you are at the MAP Programs Menu. If you find yourself at the MAP Programs Menu, begin at Step 2. If you have trouble gaining access to the MAP System, call System Studies Technical Support.

Procedure:

1) From the System Options Menu, select MAP Program. Enter *1* and press *<Return>*. You should now see the MAP Programs Menu.

2) From the MAP Programs Menu, enter *4* and press *<Return>*. After selecting the office, you should see the AlarmMAP Master Menu illustrated in SCREEN 3-4.

```
AlarmMAP Master Menu                                     AlarmMAP XX.XX.XX
08/12/2008  10:36                              System Studies Incorporated
--------------------------------------------------------------------------

AlarmMAP Master Menu
-------------------
  1. Dispatch Histories
  2. Alarm vs Time of Day Report
  3. Daily Alarm Summary Report
  4. Alarm Summary Report
  5. Alarm vs Device Type Report
  6. Distribute Alarm Dispatches to Centers
  7. Acknowledge Dispatch Alarms
  8. Send Test Alarm to Center
  Q. Quit

Choice?
```

SCREEN 3-4: ALARMMAP MASTER MENU

3) From the AlarmMAP Master Menu, select Dispatch Histories. Press *1 <Return>*. After selecting Dispatch Histories, the program will prompt you for the office name.

4) Type in the name or number of the office from the Office List and press *<Return>*. You may also type a *?* to see the Office List in spreadsheet selection mode (described in the Preface of this manual). You should see the Dispatch Histories Menu for the office that you selected as illustrated in SCREEN 3-5.

```
Dispatch Histories Menu                                    AlarmMAP XX.XX.XX
08/12/2008  15:43                               System Studies Incorporated
------------------------------------------------------------------------------

Dispatch Histories Menu for <OFFICE NAME>
----------------------------------------
   1. Set beginning and ending viewing dates [(default dates)]
   2. Set daily viewing period [(default times)]
   3. Reset dates and viewing period to default values
   4. View dispatch histories
   5. Select another office
   Q. Quit

Choice?
```

SCREEN 3-5: DISPATCH HISTORIES MENU

Procedure to Set the Beginning and Ending Dates for Dispatch Histories

This procedure begins at the Dispatch Histories Menu. If you cannot find this menu, follow the Finding the Dispatch Histories Menu subsection presented earlier in this section. You should the menu illustrated in Screen 3-3.

1)   From the Dispatch Histories Menu select "Set beginning and ending viewing dates [default dates]." Enter *1* and press *<Return>*. You will see the following prompt:

         Enter the beginning date [(default date)]   (mm/dd) :

2)   Either type in new beginning viewing dates using the mm/dd format followed by *<Return>*, or simply press *<Return>* to accept the default dates shown. AlarmMAP keeps dispatch information for the previous 60 days. If you select a starting day past this range, an error message will be displayed on the screen, and you will be prompted for a new start date.

     After correctly inputting the start date, you will see the following screen prompt:

         Enter the ending date [(default date)]   (mm/dd) :

3)   As before, type in a new date followed by *<Return>*, or press *<Return>* to accept the default ending viewing date. You will be returned to the Dispatch Histories Menu.

Procedure to Set the Daily Viewing Period

This procedure begins at the Dispatch Histories Menu. If you cannot find this menu, follow the Finding the Dispatch Histories Menu subsection presented earlier in this section. You should see SCREEN 3-3.

1)   From the Dispatch Histories Menu select "Set daily viewing period [default times]." Enter *2* and press *<Return>*. You will see the following prompt:

         Enter the beginning time [(00:00)] (hh:mm in 24 hr time) :

2)   Either type in a new time to begin the daily viewing period using the hh:mm format followed by *<Return>*, or simply press *<Return>* to accept the default time shown. You will see the following message added to the screen prompting you for an ending time.

         Enter the ending time [23:59]   (hh:mm in 24 hr time) :

3) As before, type in a new time followed by *<Return>*, or press *<Return>* to accept the default ending viewing time. You will be returned to the Dispatch Histories Menu.

Procedure to Reset the Dates and Viewing Period to the Default Values

This procedure begins at the Dispatch Histories Menu. If you cannot find this menu, follow the Finding the Dispatch Histories Menu subsection presented earlier in this section. You should see SCREEN 3-6.

```
Dispatch Histories Menu                              AlarmMAP XX.XX.XX
08/12/2008  15:43                           System Studies Incorporated
------------------------------------------------------------------------

Dispatch Histories Menu for <OFFICE NAME>
----------------------------------------
  1. Set beginning and ending viewing dates [(default dates)]
  2. Set daily viewing period [(default times)]
  3. Reset dates and viewing period to default values
  4. View dispatch histories
  5. Select another office
  Q. Quit

Choice?
```

SCREEN 3-6: DISPATCH HISTORIES MENU

From the Dispatch Histories Menu, select Option #3, "Reset dates and viewing period to default values." Press *3 <Return>*. The dates and times will be reset and you will be returned to the Dispatch Histories Menu.

Procedure to View Dispatch Histories

This procedure begins at the Dispatch Histories Menu. If you cannot find this menu, follow the Finding the Dispatch Histories Menu subsection presented earlier in this section.

1) From the Dispatch Histories Menu, select Option #4, "View Dispatch Histories" Press *4 <Return>*. You should see SCREEN 3-7.

```
View Dispatch Histories
-----------------------
  1. History by task number
  2. History by device number
  3. History by pipe
  4. History by location
  5. History by dispatch log entry type

Choice?
```

SCREEN 3-7: VIEW DISPATCH HISTORIES MENU

2) This menu offers you five ways to specify what dispatch histories you want to examine. Press the number of one of the options followed by *<Return>*. You will next see a message asking you to specify what task number, device number, pipe, location, or log entry type for which you would like to see the dispatches. A description for each of the options is given on the following pages.

History by Task Number

Task numbers are the seven-character alphanumeric numbers that identify a certain PressureMAP Dispatch or Dispatch Alarm. The first three digits of this number, the Julian date, indicate when the dispatch was created. The last four characters utilize hexadecimal base 16 numbering to provide a unique number ranging from 0001 to 65535 (or 0001 to FFFF, in hexadecimal numbering). When entering a task number, preceding zeros are not needed but may be included. For example, both "004A479" and "4A479" are valid task numbers. A single task number may be entered or multiple task numbers separated by a "," or a "/". If a "," is used, only task numbers that exactly match the task number before or after the comma will be shown. If a "/" is used all task numbers matching the task number before or after the forward slash and all task numbers numerically between these two numbers will be displayed. For example: 40011,40014/40017 will show log entries that match the task numbers 0040011, 0040014, 0040015, 0040016, and 0040017. The keyword ALL may also be used to view all task numbers.

History by Device Number

The Device Number is the letter/number identifier of the transducer, contact alarm, volume counter, or trunk/toll contactor selected. Monitoring device identifiers, such as "P-023," "AF-011," and "T-004," do not require that the dash (-) or the zeros be entered when requesting information. PressureMAP will recognize a Device Number such as "P23." (Note that this is in effect only if you are not using user-defined device numbers.) A single device number may be entered or multiple device numbers separated by a "," or a "/". If a "," is used only device numbers exactly matching the device number before or after the "," will be shown. If a "/" is used all device numbers matching the device number before or after the "/" and all device numbers numerically between these two numbers will be displayed. The keyword ALL may also be used to view all device numbers.

If you are viewing an office that has "User Defined Devices" turned on, you may also select a monitoring device by entering the corresponding access number. Access numbers are entered with a leading sharp character (eg. "#001A") to distinguish them from device numbers and may be abbreviated. For example, "#1" is interpreted as "#P -001" for a Chatlos L2, "#T-001" for Sparton, and #001A for E2A. For 289H LSS devices, the device/access number is a card/pair combination. For example, "#2-1" is interpreted as "002-01". However, to look at a device with access number 001-02, you could enter either "#1-2" or "#2" since if you only specify the pair, the program assumes card 1.

You may enter a single access number, or if you wish to generate a Specific Device Report for several devices, enter multiple access numbers separated by commas. Access numbers may also be combined with device numbers in the same entry (e.g. "#1, #2, A1P1/B1F3"). Complete the entry by pressing the *<Return>* key.

It is important to note that the sharp (#) is already allowed as a valid character in user defined device numbers, and continues to be allowed in these numbers. All user input entered with a leading sharp that **exactly** matches an existing device number (leading sharp included) are NOT treated as access numbers, but reference the matching device number. For example, if an E2A office has a user defined device number "#11", then a user entry of "#11" selects the device, NOT access number "011A".

History by Pipe

A pipe consists of an alphanumeric string that is one to four characters in length. Control characters and the "?" character are the only characters that can not be used in the string. You may enter one pipe or multiple pipes separated by a "," and/or a "/". The "/" will show you a range of pipes. In

other words, all pipes that are alphabetically between the pipe before the "/" and the pipe after the "/". The "," will show you only those pipes that exactly match the pipe before the "," or the one after the ",".

History by Location

A location code is a permanent, non-duplicated alpha numeric string, one to four characters in length, that represents the unique physical location of a monitoring device or devices within an office. Control characters and the "?" character are the only characters that can not be used in the string. You may enter one location code or multiple location codes separated by a "," and/or a "/". The "/" will show you a range of location codes. In other words, all locations codes that are alphabetically between the location code before the "/" and the location code after the "/". The "," will show you only those location codes that exactly match the location code before the "," or the one after the ",".

History by Dispatch Log Entry Type

Dispatch Log Entries are messages that appear on the Dispatch Activity Status Line of the Dispatch Report. As each subsequent message that applies to the dispatch is added to the report, the previous message is moved to the `Condition` column of the report. You may enter one or a list of log entry types separated by commas and/or slashes. Entries may be entered as numbers or character strings. Character strings may be abbreviated. Slashes will give you a range of log types to view while commas allow a list of log types to be viewed. For example: entering *1/4,7,8* would match log entry types 1 through 4, 7, and 8. Entering *cr/inf,ack,cha* would do the same thing.

Below, a description is given for each of the Dispatch Log Entry Types:

- CREATED—A dispatch or alarm condition has been found, but not yet sent to a center.

- AGED—A dispatch or alarm that has not cleared and is more than one day old.

- CLEARED—A dispatch condition that has cleared.

- INFLATED—A dispatch condition that degraded to a higher priority level.

- FILTERED—An alarm that was "filtered" and not sent.

- SENT—A dispatch or alarm that has been sent and received by a center.

- CHANGED—A dispatch or alarm for a device with an existing condition that has changed.

- CREATED CLRD ALARM—An alarm condition that has cleared.

- SENT CLRD ALARM—An alarm condition that has cleared and a cleared dispatch has been sent to an alarm center.

- ALARM NOT SENT—An alarm that could not be sent to a center due to modem, phone line, printer or other equipment malfunction.

Completing the View Dispatch Histories Record

Type in the information requested followed by a *<Return>*. If you have any question about the format that you should use to type the information, type in a *?* to see a help screen.

After you have specified a task number, device number, pipe, location, or log entry type, the program will display a list of all the related dispatches that occurred within the time that you previously specified. If there were no related dispatches in that time frame, you will see the message:

No data found to match the current viewing parameters

Note that this message will also be displayed if the search specifications that you entered were formatted correctly but if no elements described by those specifications were found. For example, if you correctly entered *G* for a pipe route specification but no Pipe Route G existed in the office selected, you would get the above message.

When you enter a correctly formatted, valid search specification, you will see a listing of dispatches similar to the one displayed on SCREEN 3-8. When displayed, the list will scroll up the screen. To stop or restart the scrolling, press *<Ctrl S>*. Although *<Ctrl S>* works as a toggle on most computers, you may need to use *<Ctrl Q>* to resume scrolling.

Note: In PressureMAP Version 27 the View Dispatch Histories output has been expanded to include not only the current reading that existed for the dispatch at the specified date and time, but also reading histories (Last, Tdy, -1,-2,-3,-4). This information is helpful in evaluating the probably cause of the dispatch.

```
View Dispatch Histories for (office name) (page 1)        AlarmMAP XX.XX.XX
8/05/2008  15:55                                   System Studies Incorporated
-------------------------------------------------------------------------------

Task Number: 2180001                   Device Number: 002-01
Entry Type:  CREATED                   Entry Time:    5/27, 15:38
Level:       **                        Location:      4
Dispatch:    UG Cable PTD lost  3.0 psi in 72 hr
Disp. Code:  2700                      Device Type:   UP
Rdg. Time:   5/27, 7:00:02            Reading:       3.0 psi
Last Rdg:    2.0                       Tdy Rdg:       3.0
-1 Rdg:      4.0                       -2 Rdg:        5.0
-3 Rdg:      6.0                       -4 Rdg:        7.0

Task Number: 2180003                   Device Number: 002-01
Entry Type:  CHANGED DISPATCH CODE     Entry Time:    5/27, 15:38
Level:       ***                       Location:      4
Dispatch:    UG Cable PTD lost  3.0 psi in < 48 hr
Disp. Code:  8580                      Device Type:   UP
Rdg. Time:   5/27, 15:37:26           Reading:       1.0 psi
Last Rdg:    2.0                       Tdy Rdg:       3.0
-1 Rdg:      4.0                       -2 Rdg:        5.0
-3 Rdg:      6.0                       -4 Rdg:        7.0
Old Level:   **
Old Disp.:   UG Cable PTD lost  3.0 psi in 72 hr

```

SCREEN 3-8: DISPATCH HISTORIES

3)   Press *<Return>* to return to the Dispatch Histories Menu.

Procedure to Select Another Office
This procedure begins at the Dispatch Histories Menu. If you cannot find this menu, follow the Finding the Dispatch Histories Menu subsection presented earlier in this section.

1)   From the Dispatch Histories Menu select "Select Another Office." Press **5 *<Return>***. You should see the following prompt:

    Currently Viewing Dispatch Histories for (office name)

    Dispatch Histories for which office?

2)   Type in the name of the office that you want to switch to and press ***<Return>*.** You will be returned to the Dispatch Histories Menu and the new office name will be displayed in the menu title.

Quit Dispatch Histories Menu
The final menu option is Quit. As the name indicates, this option is used to exit the Dispatch Histories Menu and return to the AlarmMAP Master Menu.

Procedure:

1)   From the Dispatch Histories Menu, select *Q*, followed by ***<Return>***.

    When this option is selected, the screen will display the AlarmMAP Master Menu. If you wish to continue working with AlarmMAP, select any of the options listed on this menu. If you have finished working with AlarmMAP, you may exit the AlarmMAP Program by selecting the last menu item on the menu.

2)   Enter a *Q* for Quit, followed by ***<Return>***.

    This step will return you to the MAP Programs Menu.

ALARM vs TIME OF DAY REPORT
Like Dispatch Histories, the next AlarmMAP Master Menu option provides key information for analyzing alarm activity. The Alarm vs Time of Day Report option enables you to view all of the devices that have come into alarm during each of the twelve daily calling cycles. You can set the beginning/ending viewing dates and the daily viewing time period. You can also manually reset the program's default viewing selections.

This menu option makes it possible for you to analyze the daily occurrences of alarms in a given office (by device type), compare them with alarms in other offices, and identify general trends in alarming. For example, in an office with multiple air dryers, if you notice that certain pressure devices are going into alarm each day—at approximately the same time—and then clearing, it is possible that the cause of the alarms could be attributed to changes in output pressure at the dryers. The information in the Alarm vs Time of Day Report makes it possible to evaluate conditions of this type.

Finding the Alarm vs Time of Day Report Menu
Before you can begin working with the Alarm vs Time of Day Report, you must bring the AlarmMAP Master Menu to your screen. The procedure below explains how to do that. If you log into PressureMAP at the System Options menu, begin this procedure at Step #1. Note that if you pause too long during the option selection process, the Time Default function may back you out through the menus until you arrive at the MAP Programs Menu. If you find yourself at the MAP Programs Menu, begin at Step 2.

Procedure:

1) From the System Options Menu, select Option 1, MAP Program. Enter *1* and press *<Return>*. You should now see the MAP Programs Menu.

2) From the MAP Programs Menu, enter *4* and press *<Return>*. This produces the AlarmMAP Master Menu illustrated in SCREEN 3-9.

```
AlarmMAP Master Menu                                    AlarmMAP XX.XX.XX
08/12/2008  10:36                            System Studies Incorporated
-------------------------------------------------------------------------

AlarmMAP Master Menu
-------------------
  1. Dispatch Histories
  2. Alarm vs Time of Day Report
  3. Daily Alarm Summary Report
  4. Alarm Summary Report
  5. Alarm vs Device Type Report
  6. Distribute Alarm Dispatches to Centers
  7. Acknowledge Dispatch Alarms
  8. Send Test Alarm to Center
  Q. Quit

Choice?
```

SCREEN 3-9: ALARMMAP MASTER MENU

3) From the AlarmMAP Master Menu, select Option 2, Alarm vs Time of Day Report. Enter *2* and *<Return>*. After selecting this option, the program will prompt you for the office name.

Alarm vs Time of Day Report for which office?

4) Type in the name or number of the office from the Office List and press *<Return>*. You may also type a *?* to view the offices in selection spreadsheet format. You should see the Alarm vs Time of Day Report Menu for the office that you selected in a display similar to SCREEN 3-10.

```
Alarm vs Time of Day Report Menu                        AlarmMAP XX.XX.XX
08/12/2008  10:07                            System Studies Incorporated
-------------------------------------------------------------------------

Alarm vs Time of Day Report Menu for <OFFICE NAME>
--------------------------------------------------
  1. Set beginning and ending viewing dates [4/05, 5/05]
  2. Set daily viewing period [00:00, 23:59]
  3. Reset dates and viewing period to default values
  4. View Alarm vs Time of Day Report
  5. Select another office
  Q. Quit

Choice?
```

SCREEN 3-10: ALARM VS TIME OF DAY REPORT MENU

Procedure to Set Viewing Dates and Times for the Alarm vs Time of Day Report

AlarmMAP gives you the ability to define the parameters for your alarm report by entering beginning and ending viewing dates, and well as daily viewing periods. Of course, you may also accept the default

viewing values, which are displayed when you first access the Alarm vs Time of Day Report Menu. By default, the program sets a five week viewing period, ending on the current day and extending backward approximately 35 days. If you would like to extend this range, AlarmMAP will allow you to set a maximum viewing period of 60 days.

The daily viewing period can also be manually selected. The default setting is for the full 24 hours, but you can establish a much shorter daily viewing period, if desired. You can also manually reset the viewing dates to the program's default values, but once you exit the Alarm vs Time of Day Report Menu for the selected office, AlarmMAP will automatically reset the default viewing options.

The procedure to set viewing dates begins at the Alarm vs Time of Day Report Menu shown in SCREEN 3-10 above. If you cannot find this menu, please refer to the instructions for Finding the Alarm vs Time of Day Report Menu, described above.

Procedure:

1)	To set the beginning and ending viewing dates, select Option 1 from the Alarm vs Time of Day Report Menu. Enter *1* followed by *<Return>*.

	AlarmMAP responds by displaying the message shown below.

	```
	Enter the beginning date [04/05] (mm/dd):
	```

2)	Enter the desired beginning date in the mm/dd format requested. Notice that the old (or default) beginning date setting is displayed in brackets. This is the value that will be reset if you select Option 3, "Reset dates and viewing period to default values." Follow your entry by hitting *<Return>*.

	The program now displays the following prompt:

	```
	Enter the ending date [05/05] (mm/dd):
	```

3)	Type in the ending date for your Alarm vs Time of Day Report Menu and follow the entry with a *<Return>*. (Note: if you choose not to change the ending date, AlarmMAP will use the default ending date.) The program re-displays the Alarm vs Time of Day Report Menu with your report beginning and ending dates displayed.

4)	To change the daily viewing period, select Option 2 from the Alarm vs Time of Day Report Menu. Enter *2* followed by *<Return>*.

	AlarmMAP responds by displaying the message shown below.

	```
	Enter the beginning time [00:00] (hh:mm in 24 hour time):
	```

5)	Enter the desired starting time for the report you wish to generate, and follow your entry with a *<Return>*.

	The program then displays the following message:

	```
	Enter the ending time [00:00] (hh:mm in 24 hour time):
	```

6)   Define the ending time for the Alarm vs Time of Day Report by typing the desired four digit number. Follow this entry with a *<Return>*. At this point, the Alarm vs Time of Day Report Menu displays (SCREEN 3-9), and you can choose one of the other report options.

Procedure to Reset Dates and Viewing Period to Default Values

If you inadvertently set the incorrect beginning and ending dates, or merely wish to reset them to the default values, you will first need to access the Alarm vs Time of Day Report Menu shown in SCREEN 3-10 above. From the Alarm vs Time of Day Report Menu, enter *3* followed by *<Return>*. This resets the default values and keeps the cursor at the menu, where you can select other options.

If you cannot find this menu, please refer to the instructions for Finding the Alarm vs Time of Day Report Menu, described in this section.

Procedure to View Alarm vs Time of Day Report

Once you have set the viewing dates as described in the procedures above, you will need to select the option for accessing the report. From the Alarm vs Time of Day Report Menu shown in SCREEN 3-10 above, select Option *4* followed by a *<Return>*. The program will display the following report.

```
Alarm vs Time of Day Report                                     AlarmMAP XX.XX.XX
08/12/2008  10:58                                       System Studies Incorporated
-------------------------------------------------------------------------------

      <OFFICE NAME> - Dates 7/4 through 8/3, Period 00:00 to 23:59 Hours

                        Midnight    6AM           Noon          6PM
Device Number    Type   00  02  04  06  08  10  12  14  16  18  20  22   Total
-------------    ----   --- --- --- --- --- --- --- --- --- --- --- ---  -----
001-A1-001A      UP      3   2   2                   1                       8
002-A1-001A      MF                  1  12           1                      14
   001-10        CA     30           1                                      31
   001-11        UP          4                                               4
   001-12        UP                              6           1               7
   002-13        MF      5                               1           2       8
     Etc.


                        --- --- --- --- --- --- --- --- --- --- --- ---  -----
           Totals       38   6   3   1  12       7   1   1   1       2      72
```

REPORT 3-6: ALARM VS TIME OF DAY REPORT

The first line of the report lists the office name, followed by the selected date range and period. Directly below is the compiled alarm information. Notice that alarm occurrences are listed in the report for each of the devices represented in the Device Number column. The second column on the report lists the corresponding Device Types, and the next twelve columns represent each of the PressureMAP two-hour calling cycles. The numeric values in each of these columns indicates how many alarms have been generated for the specific device during the defined calling cycle. The last column of the report provides a total number of alarms generated for each Device Number. The total alarm occurrences for each calling cycle are provided at the bottom of the report, as is a total of all the alarms represented.

Procedure to Select Another Office

Option #5 of the Alarm vs Time of Day Report Menu enables you to view a report for another office. When you select this option, AlarmMAP first indicates which office is currently being viewed, as follows:

```
Currently viewing Alarm vs Time of Day for <OFFICE NAME>
```

This prompt is followed by the request for an additional office name or number:

```
Alarm vs Time of Day Report for which office?
```

Procedure:
    1)   To view an Alarm vs Time of Day Report for another office, select the office by entering the designated office number followed by *<Return>*. You may also type a *?* to view the offices in selection spreadsheet mode. Once you have selected another office to view, AlarmMAP will redisplay the Alarm vs Time of Day Report Menu (SCREEN 3-10) listing the office you selected on the status line.

    2)   Follow the procedures explained above for selecting viewing dates and time period.

Quit Alarm vs Time of Day Report Menu

The final menu option is Quit. As the name indicates, this option is used to exit the Alarm vs Time of Day Report Menu and return to the AlarmMAP Master Menu.

Procedure:
    1)   From the Alarm vs Time of Day Report Menu, select *Q*, followed by *<Return>*.

        When this option is selected, the screen will display the AlarmMAP Master Menu. If you wish to continue working with AlarmMAP, select any of the options listed on this menu. If you have finished working with AlarmMAP, you may exit the AlarmMAP Program by selecting the last menu item on the menu.

    2)   Enter a *Q* for Quit, followed by *<Return>*.

        This step will return you to the MAP Programs Menu.

DAILY ALARM SUMMARY REPORT

Another valuable alarm analysis report is the Daily Alarm Summary Report. This report, accessed via the AlarmMAP Master Menu, displays the number of alarms as a function of day of the week. Like the previous alarm report option (described above), you have the ability to select the beginning and ending viewing dates for the report, as well as the viewing period. Of course, you may also accept the default viewing values, which are displayed when you first access the Daily Alarm Summary Report Menu.

Finding the Daily Alarm Summary Report Menu

The Daily Alarm Summary Report is one of six options available from the AlarmMAP Master Menu. You can access this screen from the MAP Programs Menu. The procedure below explains how to do that. If you log into PressureMAP at the System Options menu, begin this procedure at Step #1. From the MAP Programs Menu, begin at Step 2.

Procedure:
    1)   At the System Options Menu select MAP Program by entering *1* followed by *<Return>*. You should now see the MAP Programs Menu.

    2)   Next select Option #4, AlarmMAP Master Menu, by entering *4* followed by *<Return>*. You should see the AlarmMAP Master Menu illustrated in SCREEN 3-11.

```
AlarmMAP Master Menu                                    AlarmMAP XX.XX.XX
08/12/2008  10:36                             System Studies Incorporated
-------------------------------------------------------------------------

AlarmMAP Master Menu
-------------------
  1. Dispatch Histories
  2. Alarm vs Time of Day Report
  3. Daily Alarm Summary Report
  4. Alarm Summary Report
  5. Alarm vs Device Type Report
  6. Distribute Alarm Dispatches to Centers
  7. Acknowledge Dispatch Alarms
  8. Send Test Alarm to Center
  Q. Quit

Choice?
```

SCREEN 3-11: ALARMMAP MASTER MENU

3)   From the AlarmMAP Master Menu select Daily Alarm Summary Report by pressing *3*
     followed by *<Return>*. After selecting this option, the program will prompt you for the office
     name.

               Daily Alarm Summary Report for which office?

4)   Type in the name or number of the office from the Office List and press *<Return>*. You may
     also type a *?* to view the offices in your system. You should now see the Daily Alarm
     Summary Report Menu for the office that you selected, as illustrated in SCREEN 3-12.

```
Daily Alarm Summary Report Menu                         AlarmMAP XX.XX.XX
08/12/2008   9:07                             System Studies Incorporated
-------------------------------------------------------------------------

Daily Alarm Summary Report Menu for <OFFICE NAME>
-------------------------------------------------
  1. Set beginning and ending viewing dates [3/16, 4/16]
  2. Set daily viewing period [00:00, 23:59]
  3. Reset dates and viewing period to default values
  4. View Daily Alarm Summary Report
  5. Select another office
  Q. Quit

Choice?
```

SCREEN 3-12: DAILY ALARM SUMMARY REPORT MENU

Procedure to Set Viewing Dates and Times for the Daily Alarm Summary Report

Like the other AlarmMAP history and report options, the program gives you the ability to define the
parameters for your Daily Alarm Summary Report by entering beginning and ending viewing dates and
the daily viewing period. By default, the program sets a five week viewing period, ending on the current
day and extending backward approximately 35 days. If you would like to extend this range, AlarmMAP
will allow you to set a maximum viewing period of 60 days.

The daily viewing time period, which is set to 24 hours by default, can also be shortened to virtually any time period you desire. You can also manually reset the viewing dates to the program's default values. Please note that once you exit the Daily Alarm Summary Report Menu for the selected office, however, AlarmMAP will automatically reset the default viewing options.

The procedures for resetting the viewing dates are described below. They begin at the Daily Alarm Summary Report Menu (SCREEN 3-12). If you cannot find this menu, please refer to the instructions for Finding the Daily Alarm Summary Report Menu, described above.

Procedure:

1) You can set the beginning and ending viewing dates by selecting Option 1 from the Daily Alarm Summary Report Menu. Enter *1* followed by *<Return>*.

   AlarmMAP responds by displaying the message shown below.

   ```
   Enter the beginning date [03/16] (mm/dd):
   ```

2) Enter the desired beginning date in the mm/dd format requested. Notice that the established beginning date is displayed in parentheses. This is the value that will be reset if you select Option 3, "Reset dates and viewing period to default values." Follow your entry by hitting *<Return>*.

   The program now displays the following prompt:

   ```
   Enter the ending date [03/16] (mm/dd):
   ```

3) Type in the ending date for your desired report, and follow the entry with a *<Return>*. The program re-displays the Daily Alarm Summary Report Menu (SCREEN 3-12).

4) To change the daily viewing period, select Option 2 from the Daily Alarm Summary Report Menu. Enter *2* followed by *<Return>*.

   AlarmMAP responds by displaying the message shown below.

   ```
   Enter the beginning time [00:00] (hh:mm in 24 hour time):
   ```

5) Enter the desired starting time for the report you wish to generate, and follow your entry with a *<Return>*.

   The program then displays the following message:

   ```
   Enter the ending time [00:00] (hh:mm in 24 hour time):
   ```

6) Define the ending time for the Daily Alarm Summary Report by typing the desired four digit number. Follow this entry with a *<Return>*. At this point, the Daily Alarm Summary Report Menu displays, and you can choose one of the other report options.

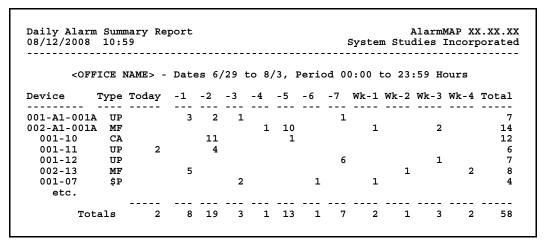## *Procedure to Reset Dates and Viewing Period to Default Values*

If you wish to reset the beginning and ending dates or daily viewing period, you will need to access the Daily Alarm Summary Report Menu (SCREEN 3-12). select Option 3, "Reset dates and viewing period to

default values," by entering *3* followed by *<Return>*. This resets the default values and keeps the cursor at the menu, where you can select other menu options.

If you cannot find this menu, please refer to the instructions for Finding the Daily Alarm Summary Report Menu, described earlier in this section.

Procedure to View Daily Alarm Summary Report

If you are satisfied with the default dates and viewing period for the Daily Alarm Summary Report, or if you have made the desired changes, you can now select the option for accessing the report as described below. From the Daily Alarm Summary Report Menu, select Option *4* followed by a *<Return>*. The program will display the following report.

```
Daily Alarm Summary Report                                   AlarmMAP XX.XX.XX
08/12/2008  10:59                                   System Studies Incorporated
-------------------------------------------------------------------------------

        <OFFICE NAME> - Dates 6/29 to 8/3, Period 00:00 to 23:59 Hours

Device      Type Today  -1  -2  -3  -4  -5  -6  -7  Wk-1 Wk-2 Wk-3 Wk-4 Total
---------   ---- -----  --- --- --- --- --- --- --- ---- ---- ---- ---- -----
001-A1-001A  UP          3   2   1               1                           7
002-A1-001A  MF                      1  10               1         2        14
   001-10    CA             11           1                                 12
   001-11    UP    2         4                                             6
   001-12    UP                              6              1               7
   002-13    MF          5                           1         2        8
   001-07    $P              2           1       1                         4
     etc.
                   ----- --- --- --- --- --- --- --- ---- ---- ---- ---- -----
        Totals     2   8  19   3   1  13   1   7   2    1    3    2    58
```

REPORT 3-7: DAILY ALARM SUMMARY REPORT

As you can see from the example above, the Daily Alarm Summary Report enables you to identify the number of alarms that have been generated for each device in the selected office for the current day and for the past seven consecutive days. Assuming you have selected a full viewing period (see "Procedure for Setting Viewing Dates and Times for the Daily Alarm Summary Report" above), the report also displays the weekly totals for each of the previous four weeks. A summary of the alarms generated by each device is provided in the last column of the report, and column totals are provided at the bottom.

Procedure to Select Another Office

Option #5 of the Daily Alarm Summary Report Menu enables you to view a report for another office. When you select this option, AlarmMAP first indicates which office is currently being viewed, as follows:

Currently viewing Daily Alarm Summary for <OFFICE NAME>

This prompt is followed by the request for an additional office name or number:

Daily Alarm Summary Report for which office?

Procedure:
  1) To view a Daily Alarm Summary Report for another office, select the office by entering the designated office number followed by *<Return>*. You may also type a *?* to view the offices in selection spreadsheet mode. Once you have selected another office to view, AlarmMAP will

redisplay the Daily Alarm Summary Report Menu (SCREEN 3-12) listing the office you selected on the status line.

2)   Follow the procedures explained above for selecting viewing dates and time period.

Quit Daily Alarm Summary Report Menu

The final menu option is Quit. As the name indicates, this option is used to exit the Daily Alarm Summary Report Menu and return to the AlarmMAP Master Menu.

Procedure:
1)   From the Daily Alarm Summary Report Menu, select *Q*, followed by *<Return>*.

When this option is selected, the screen will display the AlarmMAP Master Menu. If you wish to continue working with AlarmMAP, select any of the options listed on this menu. If you have finished working with AlarmMAP, you may exit the AlarmMAP Program by selecting the last menu item on the menu.

2)   Enter a *Q* for Quit, followed by *<Return>*.

This step will return you to the MAP Programs Menu.

ALARM SUMMARY REPORT

The next report available from the AlarmMAP Master Menu is the Alarm Summary Report. This report offers you quick access to dispatch alarm totals in three categories for each device in an office. Unlike the two previous reports on the menu, the Alarm Summary Report distinguishes between types of alarms. It lists normal alarms (those "created" during the program's scheduled calling cycle), filtered alarms (those alarm conditions that have been designated for filtering during specified time periods and/or days), and inflated alarms (those alarm conditions that continued to worsen before the original alarms were cleared or aged).

An example of an inflated alarm is an underground or buried pressure transducer that dropped 3 PSI to create a four star alarm, and then dropped another 1 PSI during the next calling cycle. The additional 1 PSI drop creates an inflated alarm condition.

There are four alarm conditions that qualify for alarm filtering:

•   A Source/End Pipe PSI transducers that dropped 1 PSI or more in under 24 hours
•   A Pipe Panel flow transducer that increased 10 or more SCFH in under 24 hours
•   An air pipe manifold or distribution panel flow transducer that increased 3 SCFH or more in under 24 hours
•   An underground cable pressure transducer that dropped 1 or more PSI to 0 in under 24 hours.

During the time periods or days specified by the user (see *MAP System Data Entry Manual*, Section 11), these alarm conditions will be excluded from the normal alarm distribution process. In order to provide an indication of how many of these filtered alarms occur in an office, this classification of alarms has been included on the Alarm Summary Report. (Please note that three star alarm filtering operates independently from the filtering options for four star alarms, and is not included in the tally of filtered alarms in this report.)

Finding the Alarm Summary Report Menu

The Alarm Summary Report is one of six options available from the AlarmMAP Master Menu. You can access this screen from the MAP Programs Menu. The procedure below explains how to do that. If you log into PressureMAP at the System Options menu, begin this procedure at Step #1. From the MAP Programs Menu, begin at Step 2.

Procedure:

1) At the System Options Menu select MAP Program by entering *1* followed by *<Return>*. You should now see the MAP Programs Menu.

2) Next select AlarmMAP Master Menu by entering *4* followed by *<Return>*. You should see the AlarmMAP Master Menu illustrated in SCREEN 3-13.

```
AlarmMAP Master Menu                                    AlarmMAP XX.XX.XX
08/12/2008 10:36                               System Studies Incorporated
-------------------------------------------------------------------------------

AlarmMAP Master Menu
-------------------
  1. Dispatch Histories
  2. Alarm vs Time of Day Report
  3. Daily Alarm Summary Report
  4. Alarm Summary Report
  5. Alarm vs Device Type Report
  6. Distribute Alarm Dispatches to Centers
  7. Acknowledge Dispatch Alarms
  8. Send Test Alarm to Center
  Q. Quit

Choice?
```

SCREEN 3-13: ALARMMAP MASTER MENU

3) From the AlarmMAP Master Menu select Alarm Summary Report by pressing *4* followed by *<Return>*. After selecting this option, the program will prompt you for the office name.

Alarm Summary Report for which office?

4) Type in the name or number of the office from the Office List and press *<Return>*. You may also type a *?* to list your system's offices in selection spreadsheet format. You should now see the Alarm Summary Report Menu for the office that you selected as illustrated in SCREEN 3-14.

```
Alarm Summary Report Menu                              AlarmMAP XX.XX.XX
08/12/2008   9:07                             System Studies Incorporated
--------------------------------------------------------------------------------

Alarm Summary Report Menu for <OFFICE NAME>
-------------------------------------------
   1. Set beginning and ending viewing dates [3/16, 4/16]
   2. Set daily viewing period [00:00, 23:59]
   3. Reset dates and viewing period to default values
   4. View Daily Alarm Summary Report
   5. Select another office
   Q. Quit

Choice?
```

SCREEN 3-14: ALARM SUMMARY REPORT MENU

Procedure to Set Viewing Dates and Times for the Alarm Summary Report

AlarmMAP gives you the ability to define the parameters for your Alarm Summary Report by entering beginning and ending viewing dates and the daily viewing period. By default, the program sets a five week viewing period, ending on the current day and extending backward approximately 35 days. If you would like to extend this range, AlarmMAP will allow you to set a maximum viewing period of 60 days.

The daily viewing time period, which is set to 24 hours by default, can also be shorten to virtually any time period you desire. You can also manually reset the viewing dates to the program's default values. Please note that once you exit the Alarm Summary Report Menu for the selected office, however, AlarmMAP will automatically reset the default viewing options.

The procedures for resetting the viewing dates are described below. They begin at the Alarm Summary Report Menu (SCREEN 3-14). If you cannot find this menu, please refer to the instructions for Finding the Alarm Summary Report Menu, described above.

Procedure:

1) You can set the beginning and ending viewing dates by selecting Option 1 from the Alarm Summary Report Menu by entering *1* followed by *<Return>*.

   AlarmMAP responds by displaying the message shown below.

   Enter the beginning date [03/16] (mm/dd):

2) Enter the desired beginning date in the mm/dd format requested. Notice that the established beginning date is displayed in brackets. This is the value that will be reset if you select Option 3, "Reset dates and viewing period to default values." Follow your entry by hitting *<Return>*.

   The program now displays the following prompt:

   Enter the ending date [03/16] (mm/dd):

3) Type in the ending date for your desired report, and follow the entry with a *<Return>*. The program re-displays the Alarm Summary Report Menu (SCREEN 3-14).

4) To change the daily viewing period, select Option 2 from the Alarm Summary Report Menu. Enter *2* followed by *<Return>*.

AlarmMAP responds by displaying the message shown below.

    Enter the beginning time [00:00] (hh:mm in 24 hour time):

5) Enter the desired starting time for the report you wish to generate, and follow your entry with a *<Return>*.

The program then displays the following message:

    Enter the ending time [00:00] (hh:mm in 24 hour time):

6) Define the ending time for the Alarm Summary Report by typing the desired four digit number. Follow this entry with a *<Return>*. At this point, the Alarm Summary Report Menu displays (SCREEN 3-14), and you can choose one of the other report options.

Procedure to Reset Dates and Viewing Period to Default Values

If you wish to reset the beginning and ending dates or daily viewing period, you will need to access the Alarm Summary Report Menu. Select Option 3, "Reset dates and viewing period to default values," by entering *3* followed by *<Return>*. This resets the default values and keeps the cursor at the menu, where you can select other menu options.

If you cannot find this menu, please refer to the instructions for "Finding the Alarm Summary Report Menu," described previously in this section.

Procedure to View the Alarm Summary Report

If you are satisfied with the default dates and viewing period for the Alarm Summary Report, or if you have finished making the desired changes, you are now ready to access the report. From the Alarm Summary Report Menu, select Option *4* followed by a *<Return>*. The program will display the following report.

```
Alarm Summary Report                                      AlarmMAP XX.XX.XX
08/12/2008  10:59                                 System Studies Incorporated
-------------------------------------------------------------------------------

       <OFFICE NAME> - Dates 7/4 to 8/3, Period 00:00 to 23:59 Hours

                   Alarms        Alarms        Alarms        Total
Device      Type   Created       Filtered      Inflated      Alarms
---------   ----   -------       --------      --------      -------
001-A1-001A  UP       3             1             1             5
002-A1-001A  MF       1             0             0             1
   001-10    CA       6             0             0             6
   001-11    UP       4             2             3             9
   001-12    UP       0             1             0             1
   002-13    MF       3             2             1             6
   001-07    $P       1             0             0             1
      etc.
                   -------       --------      ---------     -------
       Totals        18             6             5            29
```

REPORT 3-8: ALARM SUMMARY REPORT

The Alarm Summary Report consists of a top row of information, which includes the office name, the date range selected, and the period during which the alarms were generated. Below this information are the six columns shown above. Device numbers and device types are listed in the first two columns, while the next three columns indicate how many of the three alarm types occurred for each device during the viewing period. The last column on the right provides individual alarm totals for each of the devices in the office, and the total number of each type of alarm is provided at the bottom of the report.

Procedure to Select Another Office
Option #5 of the Alarm Summary Report Menu enables you to view a report for another office. When you select this option, AlarmMAP first indicates which office is currently being viewed, as follows:

> **`Currently viewing Alarm Summary for <OFFICE NAME>`**

This prompt is followed by the request for an additional office name or number:

> **`Alarm Summary Report for which office?`**

Procedure:
1) To view an Alarm Summary Report for another office, select the office by entering the designated office number followed by *<Return>*. You may also type a *?* to list the offices in spreadsheet selection mode. Once you have selected another office to view, AlarmMAP will redisplay the Alarm Summary Report Menu (SCREEN 3-14) listing the office you selected on the status line.

2) Follow the procedures explained above for selecting viewing dates and time period.

Quit Alarm Summary Report Menu
When you have finished viewing the Alarm Summary Report for an office(s), you can return to the AlarmMAP Master Menu, and other program menus, by selecting the Quit option.

Procedure:
1) From the Alarm Summary Report Menu, select *Q*, followed by *<Return>*.

   When this option is selected, the AlarmMAP Master Menu displays. If you wish to continue working with AlarmMAP, select any of the options listed on this menu. Otherwise, you may exit the AlarmMAP Program by selecting the last menu item on the menu.

2) Enter a *Q* for Quit, followed by *<Return>*.

   This step will return you to the MAP Programs Menu.

ALARM vs DEVICE TYPE REPORT
The last report available from the AlarmMAP Master Menu is the Alarm vs Device Type Report. This report enables you to view the total number of Four Star Alarms created for each device type for a specified time period. You can use the default settings for the viewing period, or manually set the beginning/ending viewing dates and the daily viewing time period. You can also manually reset the program's default viewing selections.

This menu option makes it possible for you to analyze the total occurrences of alarms in a given office (by device type), compare them with alarms in other offices, and identify general trends in alarming. You can also view the total number of alarms for all offices (by office), and compare the offices' totals to identify the office(s) that you wish to examine in more detail.

Finding the Alarm vs Device Type Report Menu

Before you can begin working with the Alarm vs Device Type Report, you must bring the AlarmMAP Master Menu to your screen. The procedure below explains how to do that. If you log into PressureMAP at the System Options menu, begin this procedure at Step #1. Note that if you pause too long during the option selection process, the Time Default function may back you out through the menus until you arrive at the MAP Programs Menu. If you find yourself at the MAP Programs Menu, begin at Step 2.
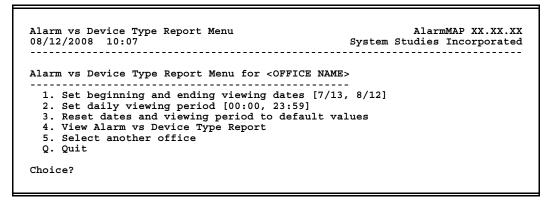
Procedure:

1) From the System Options Menu, select Option 1, MAP Program. Enter *1* and press *<Return>*. You should now see the MAP Programs Menu.

2) From the MAP Programs Menu, enter *4* and press *<Return>*. This produces the AlarmMAP Master Menu illustrated in SCREEN 3-15.

```
AlarmMAP Master Menu                                      AlarmMAP XX.XX.XX
08/12/2008  10:36                               System Studies Incorporated
-----------------------------------------------------------------------------

AlarmMAP Master Menu
-------------------
  1. Dispatch Histories
  2. Alarm vs Time of Day Report
  3. Daily Alarm Summary Report
  4. Alarm Summary Report
  5. Alarm vs Device Type Report
  6. Distribute Alarm Dispatches to Centers
  7. Acknowledge Dispatch Alarms
  8. Send Test Alarm to Center
  Q. Quit

Choice?
```

SCREEN 3-15: ALARMMAP MASTER MENU

3) From the AlarmMAP Master Menu, select Option 5, Alarm vs Device Type Report. Enter *5* and *<Return>*. After selecting this option, the program will prompt you for the office name.

Alarm vs Device Type Report for which office?

4) Type in the name or number of the office from the Office List and press *<Return>*. You may also type a *?* to see the Office List, or type "all" to select all offices. You should see the Alarm vs Device Type Report Menu for the office that you selected in a display similar to SCREEN 3-16.

```
Alarm vs Device Type Report Menu                         AlarmMAP XX.XX.XX
08/12/2008  10:07                              System Studies Incorporated
--------------------------------------------------------------------------------

Alarm vs Device Type Report Menu for <OFFICE NAME>
-----------------------------------------------
   1. Set beginning and ending viewing dates [7/13, 8/12]
   2. Set daily viewing period [00:00, 23:59]
   3. Reset dates and viewing period to default values
   4. View Alarm vs Device Type Report
   5. Select another office
   Q. Quit

Choice?
```

SCREEN 3-16: ALARM VS DEVICE TYPE REPORT MENU

Procedure to Set Viewing Dates and Times for the Alarm vs Device Type Report

AlarmMAP gives you the ability to define the parameters for your alarm report by entering beginning and ending viewing dates, and well as daily viewing periods. Of course, you may also accept the default viewing values, which are displayed when you first access the Alarm vs Device Type Report Menu. By default, the program sets a five week viewing period, ending on the current day and extending backward approximately 35 days. If you would like to extend this range, AlarmMAP will allow you to set a maximum viewing period of 60 days.

The daily viewing period can also be manually selected. The default setting is for the full 24 hours, but you can establish a much shorter daily viewing period, if desired. You can also manually reset the viewing dates to the program's default values, but once you exit the Alarm vs Device Type Report Menu for the selected office, AlarmMAP will automatically reset the default viewing options.

The procedure to set viewing dates begins at the Alarm vs Device Type Report Menu shown in SCREEN 3-14 above. If you cannot find this menu, please refer to the instructions for Finding the Alarm vs Device Type Report Menu, described above.

Procedure:
1) To set the beginning and ending viewing dates, select Option 1 from the Alarm vs Device Type Report Menu. Enter *1* followed by *<Return>*.

   AlarmMAP responds by displaying the message shown below.

   Enter the beginning date [07/13] (mm/dd):

2) Enter the desired beginning date in the mm/dd format requested. Notice that the old (or default) beginning date setting is displayed in brackets. This is the value that will be reset if you select Option 3, "Reset dates and viewing period to default values." Follow your entry by hitting *<Return>*.

   The program now displays the following prompt:

   Enter the ending date [08/12] (mm/dd):

3)   Type in the ending date for your Alarm vs Device Type Report Menu and follow the entry with a *<Return>*. (Note: if you choose not to change the ending date, AlarmMAP will use the default ending date.) The program re-displays the Alarm vs Device Type Report Menu with your report beginning and ending dates displayed.

4)   To change the daily viewing period, select Option 2 from the Alarm vs Device Type Report Menu. Enter *2* followed by *<Return>*.

     AlarmMAP responds by displaying the message shown below.

```
Enter the beginning time [00:00] (hh:mm in 24 hour time):
```

5)   Enter the desired starting time for the report you wish to generate, and follow your entry with a *<Return>*.

     The program then displays the following message:

```
Enter the ending time [00:00] (hh:mm in 24 hour time):
```

6)   Define the ending time for the Alarm vs Device Type Report by typing the desired four digit number. Follow this entry with a *<Return>*. At this point, the Alarm vs Device Type Report Menu displays (SCREEN 3-16), and you can choose one of the other report options.

Procedure to Reset Dates and Viewing Period to Default Values

If you inadvertently set the incorrect beginning and ending dates, or merely wish to reset them to the default values, you will first need to access the Alarm vs Device Type Report Menu shown in SCREEN 3-16 above. From the Alarm vs Device Type Report Menu, enter *3* followed by *<Return>*. This resets the default values and keeps the cursor at the menu, where you can select other options.

If you cannot find this menu, please refer to the instructions for Finding the Alarm vs Device Type Report Menu, described in this section.

Procedure to View Alarm vs Device Type Report

Once you have set the viewing dates as described in the procedures above, you will need to select the option for accessing the report. From the Alarm vs Device Type Report Menu shown in SCREEN 3-16 above, select Option *4* followed by a *<Return>*. The program will display the report as shown on the following pages.

If you selected an individual office, the report displayed will be similar to the one shown on REPORT 3-9. If you selected ALL offices, the report will resemble the one shown on REPORT 3-10, which is more of a summary format. Please note that it is also possible to generate an expanded report when ALL offices are selected by entering *4x* from the Alarm vs Device Type Report Menu. This expanded output is the detail shown for an individual office, but it includes each of the offices in the system (REPORT 3-11).

```
Alarm vs Device Type Report                               AlarmMAP XX.XX.XX
08/12/2008  10:36                               System Studies Incorporated
----------------------------------------------------------------------------

        <OFFICE NAME> - Dates 7/13 through 8/12, Period 00:00 to 23:59 Hours

                                         Total    Number  Number    Number
Device Type                              Devices  Alarms  Disabled  Open/Short
---------------------------------------  -------  ------  --------  ----------
$F - High Priority Flow TD                  1        1                  1
CA - Compressor/Dryer Contact Alarm         1        1                  1
KA - Alternating Contact Alarm              6        3        2         3


---------------------------------------  -------  ------  --------  ----------
      Totals                                8        5        2         5
```

REPORT 3-9: ALARM VS DEVICE TYPE REPORT

The first line of the report lists the office name, followed by the selected date range and period. Directly below is the compiled alarm information. Notice that alarm occurrences are listed in the report for each of the device types represented in the Device Type column. The second column on the report shows the total **current** number of devices of each type, regardless of the alarm state and independent of the time period selected. The third column lists how many Four Star Alarms have been generated for the device type during the viewing period. The fourth column displays the **current** number of disabled devices of the indicated type (independent of the time period selected). The last column lists the total number of alarms for each type during the viewing period for which the reading was OPEN or SHRT. The totals for the four numeric value columns are displayed at the bottom of the report.

```
Alarm vs Device Type Report                               AlarmMAP XX.XX.XX
08/12/2008  10:36                               System Studies Incorporated
----------------------------------------------------------------------------

        ALL OFFICES - 7/13 through 08/12, Period 00:00 to 23:59 Hours

                                         Total    Number  Number    Number
Office Name                              Devices  Alarms  Disabled  Open/Short
---------------------------------------  -------  ------  --------  ----------
SIMOFF                                      5        3                  3
NEWOFF                                      12       7        1         3
CEDAR CITY                                  1
AAB                                         10       5        2         5

---------------------------------------  -------  ------  --------  ----------
Totals                                      28       15       3         11
```

REPORT 3-10: ALARM VS DEVICE TYPE REPORT

Notice that alarm occurrences are listed in the report for each of the offices shown in the Office Name column. The second column on the report shows the total **current** total number of devices for each office, regardless of their alarm state and independent of the time period selected. The third column lists how many Four Star Alarms have been generated for all device types in the office during the viewing period. The fourth column displays the **current** total number of disabled devices for the entire office, independent of the time period selected. The last column lists the total number of alarms for all device types during the viewing period for which the reading was OPEN or SHRT. The totals for the four numeric value columns are displayed at the bottom of the report.

```
Alarm vs Device Type Report                              AlarmMAP XX.XX.XX
12/03/2008  09:53                               System Studies Incorporated
-----------------------------------------------------------------------------

            <OFFICE NAME1> - Dates 11/3 to 12/3, Period 00:00 to 23:59 Hrs

                                  Total    Number  Number   Number
      Device Type                 Devices  Alarms  Disabled Open/Short
--------------------------------- -------  ------- -------- ----------
$A   High Priority Contact Alarm      1       2
$P   High Priority Pressure TD        8       4                  2
BP   Buried Cable Pressure TD         5       2                  2
CA   Compressor/Dryer Contact Alarm   1       2

--------------------------------- -------  ------- -------- ----------
     Totals                          15      10                 4

=============================================================================
            <OFFICE NAME2> - Dates 11/3 to 12/3, Period 00:00 to 23:59 Hrs

                                  Total    Number  Number   Number
      Device Type                 Devices  Alarms  Disabled Open/Short
--------------------------------- -------  ------- -------- ----------
     No alarms for this office.

--------------------------------- -------  ------- -------- ----------
      Totals

=============================================================================
            <OFFICE NAME3> - Dates 11/3 to 12/3, Period 00:00 to 23:59 Hrs

                                  Total    Number  Number   Number
      Device Type                 Devices  Alarms  Disabled Open/Short
--------------------------------- -------  ------- -------- ----------
$P   High Priority Pressure TD        4       1
SF   Source Flow TD                   1       1
UP   Underground Cable Pressure TD    2       1

--------------------------------- -------  ------- -------- ----------
      Totals                          7       3

=============================================================================
            <OFFICE NAME4> - Dates 11/3 to 12/3, Period 00:00 to 23:59 Hrs

                                  Total    Number  Number   Number
      Device Type                 Devices  Alarms  Disabled Open/Short
--------------------------------- -------  ------- -------- ----------
$F   High Priority Flow TD            1       1
$P   High Priority Pressure TD        2       1
UP   Underground Cable Pressure TD    2       2

--------------------------------- -------  ------- -------- ----------
      Totals                          5       4

=============================================================================
            <OFFICE NAME> - Dates 11/3 to 12/3, Period 00:00 to 23:59 Hrs

                                  Total    Number  Number   Number
      Device Type                 Devices  Alarms  Disabled Open/Short
--------------------------------- -------  ------- -------- ----------
$P   High Priority Pressure TD        2       1

--------------------------------- -------  ------- -------- ----------
      Totals                          2       1

Hit <Enter> to continue..
```

REPORT 3-11: ALARM VS DEVICE TYPE REPORT (Expanded Output for ALL Offices)

Procedure to Select Another Office

Option #5 of the Alarm vs Device Type Report Menu enables you to view a report for another office. When you select this option, AlarmMAP first indicates which office is currently being viewed, as follows:

```
Currently viewing Alarm vs Device Type for <OFFICE NAME>
```

This prompt is followed by the request for an additional office name or number:

```
Alarm vs Device Type Report for which office?
```

Procedure:

1) To view an Alarm vs Device Type Report for another office, select the office by entering the designated office number followed by *<Return>*. You may also type a *?* to list the offices in selection spreadsheet mode, or type "all" to select all offices. Once you have selected another office to view, AlarmMAP will redisplay the Alarm vs Device Type Report Menu (SCREEN 3-16) listing the office you selected on the status line.

2) Follow the procedures explained above for selecting viewing dates and time period.

Quit Alarm vs Device Type Report Menu

The final menu option is Quit. As the name indicates, this option is used to exit the Alarm vs Device Type Report Menu and return to the AlarmMAP Master Menu.

Procedure:

1) From the Alarm vs Device Type Report Menu, select *Q*, followed by *<Return>*.

    When this option is selected, the screen will display the AlarmMAP Master Menu. If you wish to continue working with AlarmMAP, select any of the options listed on this menu. If you have finished working with AlarmMAP, you may exit the AlarmMAP Program by selecting the last menu item on the menu.

2) Enter a *Q* for Quit, followed by *<Return>*.

    This step will return you to the MAP Programs Menu.

DISTRIBUTE ALARM DISPATCHES TO CENTERS

As explained at the beginning of this section, AlarmMAP's operation is normally unseen by the program users. AlarmMAP calls each Central Office approximately every two hours, obtaining and processing device data. If a Four Star Alarm is discovered (or a Three Star, if activated for alarm dispatching), AlarmMAP distributes the alarm throughout the Alarm Center network.

The scenario described above is the action that AlarmMAP takes as it runs through the internal MAP System scheduler. However, the alarm distribution function of AlarmMAP may also be run manually through the MAP software menu system as described below.

Procedure:

1) From the MAP System Options Menu, choose Item *1*, "Select MAP Program", and press *<Return>*.

When this menu item is selected, the MAP Programs Menu will be displayed.

2) Now select AlarmMAP, Item **4** from the MAP Programs Menu and press **<Return>**. You should see the AlarmMAP Master Menu illustrated in SCREEN 3-17.

```
AlarmMAP Master Menu                                      AlarmMAP XX.XX.XX
08/12/2008  10:36                                  System Studies Incorporated
-------------------------------------------------------------------------------

AlarmMAP Master Menu
-------------------
   1. Dispatch Histories
   2. Alarm vs Time of Day Report
   3. Daily Alarm Summary Report
   4. Alarm Summary Report
   5. Alarm vs Device Type Report
   6. Distribute Alarm Dispatches to Centers
   7. Acknowledge Dispatch Alarms
   8. Send Test Alarm to Center
   Q. Quit

Choice?
```

SCREEN 3-17: ALARMMAP MASTER MENU

3) From the AlarmMAP Master Menu, select Option #6, "Distribute Alarm Dispatches to Centers." Enter **6** and press **<Return>**. The program will prompt you for the name of the office that you want to work with.

4) Type in the name or letter designating the center from the Office List and press **<Return>**.

When AlarmMAP is invoked through the menu system, the program first checks the selected office history file, looking for system dispatches. As this process is being carried out, AlarmMAP writes the following message to the terminal:

Developing Dispatch Alarms for <OFFICENAME>

As this step is performed, an Office Dispatch File is created for each office selected. The Dispatch File contains all the problem conditions which are found in the office. After the Dispatch Files are created, AlarmMAP will check through the files to determine if any Four Star Alarms exist. During this procedure, a message will be issued to the terminal:

Checking Alarms ...

If, at this point, no system threatening alarms can be found, AlarmMAP will have finished its task, and the program will prompt:

Distribute Alarm Dispatches for which center?

If you wish to send alarms for another office, you can now type the office name or number, and AlarmMAP will check that office for alarms. To exit the alarm distribution part of the program, press **<Return>** when the prompt displayed above appears on your screen. However, if a Four Star Alarm is detected, AlarmMAP will chase the alarm by sending out the Alarm Summary to the Alarm Centers listed in the active Calling Time List. When the program is run through the menu

system, AlarmMAP will display each processing step taken by issuing a message to the login terminal.

```
Delivering Alarms to <CENTERNAME>
(<BAUDRATE> baud)
```

Note that displaying the actions of the processing is a feature of running AlarmMAP from the menu. When run from the scheduler, no processing messages are issued unless you switch to an alternate console. For example, if you enter *<Alt F10>* at your keyboard, console #10 will appear and a list of incoming alarm activity can be viewed.

The last difference you will notice when operating AlarmMAP from a terminal (as opposed to letting it run automatically from the scheduler) pertains to the CONSOLE Alarm Center. When AlarmMAP is operated from a terminal, that terminal will always be regarded as the CONSOLE terminal by AlarmMAP. The result is that the Alarm Summary will be sent to your login terminal, even if the terminal is not declared to be an Alarm Center in the AlarmMAP database.

ACKNOWLEDGE DISPATCH ALARMS

Prior to PressureMAP Version 26 alarms were distributed to designated Alarm Centers one alarm at a time, one center at a time in a serial manner. Alarm acknowledgment modes were used by AlarmMAP to control the distribution of alarms and specify the type of report sent (Summary Report, Full Report, Brief Report, etc.). At some point during a defined alarm distribution calling period, an alarm had to be acknowledged by one of the designated centers, either manually or by setting an Auto-Acknowledge mode. Acknowledgment by one of the centers stopped alarm distribution to succeeding Alarm Centers on the list for that particular calling sequence and freed up the program to distribute other office alarms.

This alarm distribution method worked adequately for years, when 72 was the maximum number of offices that one PressureMAP could monitor. After the PressureMAP office monitoring capability increased to 250, however, the distribution method no longer worked efficiently. Consequently, a new alarm distribution utility was implemented in Version 26 to replace the original sendalarm utility. The new method distributes alarms to multiple centers simultaneously. In order to achieve maximum efficiency, alarm acknowledgment is not longer required and, unless otherwise specified, a simple Summary Report is sent to each Alarm Center.

While once a convenient and practical method of manually acknowledging office dispatch alarms that had not been acknowledged at one of the Alarm Centers, the Acknowledge Dispatch Alarms option of the AlarmMAP Master Menu serves a slightly less important function in PressureMAP Versions 26 and higher. With no need now for an alarm acknowledgment during the normal alarm distribution cycle, there are very few unacknowledged alarms in an office.

Nonetheless, the Acknowledge Dispatch Alarms option gives users the ability to select an office and manually stop the distribution of alarms (if the calling cycle has not yet been completed). This menu option is also useful, in some cases, to acknowledge an alarm for a particular Alarm Center that cannot be contacted due to a modem or other communications problem.

Finding the Acknowledge Dispatch Alarms Menu
Before you can view any of the Dispatch Alarms for an office, you must bring the Acknowledge Dispatch Alarms Menu to your screen. The procedure below explains that process. Where you start in this procedure depends upon where you enter the MAP System.

If you log in at the System Options Menu, begin this procedure at Step #1. If you find yourself at the MAP Programs Menu, begin at Step 2. If you have trouble gaining access to the MAP System, contact the MAP System Administrator, or call System Studies Technical Support.

Procedure:

1) From the System Options Menu select MAP Program; enter *1* and press *<Return>*. You should now see the MAP Programs Menu.

2) From the MAP Programs Menu enter *4* and press *<Return>*. Select the office and you should see the AlarmMAP Master Menu illustrated in SCREEN 3-18.

```
AlarmMAP Master Menu                                    AlarmMAP XX.XX.XX
08/12/2008  10:36                              System Studies Incorporated
-----------------------------------------------------------------------------
AlarmMAP Master Menu
-------------------
  1. Dispatch Histories
  2. Alarm vs Time of Day Report
  3. Daily Alarm Summary Report
  4. Alarm Summary Report
  5. Alarm vs Device Type Report
  6. Distribute Alarm Dispatches to Centers
  7. Acknowledge Dispatch Alarms
  8. Send Test Alarm to Center
  Q. Quit

Choice?
```

SCREEN 3-18: ALARMMAP MASTER MENU

3) From the AlarmMAP Master Menu select Acknowledge Dispatch Alarms. Press *7* and *<Return>*. After selecting Acknowledge Dispatch Alarms, the program will prompt you for the name of the office that you want to work with.

4) Type in the name or number of the office from the Office List and press *<Return>*. You may enter a single office, or a list of offices separated with commas to select several offices. You may also type a *?* to view the offices in spreadsheet selection mode. Please note that you can select only one office at a time from the selection spreadsheet. For more information on how to select offices, please refer to the Preface section of this manual.

Depending upon the capabilities of the terminal you are using, the program will display the alarms that are available for viewing in either a menu or a selector format. If your terminal is not "browser capable" (i.e., most hard-copy terminals), the file contents will simply be printed. However, if you can utilize the browser function of the MAP Program, you will be able to search the file contents, move through the file one page at a time, view an alarm analysis information screen or, if you are at the MAP System console, copy the alarm to a DOS floppy or the printer. All of the sample screens shown in this section are from a "browser capable" terminal.

5) Select the Dispatch Alarm you wish to view by moving the selector bar and pressing the *<Return>* key. An example of a Dispatch Alarm List is shown in SCREEN 3-19.

The top two lines of the screen list the keystrokes and options that are available for the terminal type you are using. An extended help menu will "pop-up" after you enter the *H* key.

Viewing an Alarm

To view an alarm, move the cursor to the alarm and enter ***V <Return>***. The alarm and associated task information will be displayed. After you have viewed the information, press ***<Esc>*** to return to the Dispatch Alarm List. You may select another alarm to view, quit to the AlarmMAP Master Menu, or select an alarm to acknowledge. To exit from the Dispatch Alarms List, press the ***<Esc>*** key. If you do not have a "browser capable" terminal, you will need to enter the Task Number for the Dispatch Alarm you wish to view.

```
Keystrokes: [Select <Return>] [Mark <Space>] [Abort <Esc>] [Down 'J'] [Up 'K']
            [Help 'H'] [Search Forward 'F'] [Search Back 'B'] [Search Next 'N']

Select Unacknowledged Dispatch Alarm
--------------------------------------------------------------------------------

1. WEST OUTSTATE
----------------

Task #    Device #  Condition                                             Level
--------  --------- ----------------------------------------------------- -----
19300010 N1-111    UG Cable PTD lost  9.0 psi in < 24 hr                   ****
19300009 N1-110    UG Cable PTD lost  9.0 psi in < 24 hr                   ****

4. EAST JULIENNE
-------------

Task #    Device #   Condition                                            Level
--------  ---------- ---------------------------------------------------- ----
19300008 N1-112     UG Cable PTD lost  9.0 psi in < 24 hr                  ****
```

SCREEN 3-19: DISPATCH ALARM LIST

Acknowledging and Viewing Alarms

To acknowledge and view one or more alarms, move the cursor to each alarm and mark the alarm by pressing the ***<Space>*** key. Now, move the cursor to the next alarm and mark it. You may mark as many alarms as you wish using this method. If you do not have a "browser capable" terminal, you will need to enter the Task Number for the Dispatch Alarm you wish to view. You may enter a single number, or a list of numbers separated with commas to select several Dispatch Alarms.

After marking all of the alarms you wish to acknowledge and view, press ***<Return>***. If you have editor privileges, you will see the following prompt:

Acknowledge Dispatch Alarm(s)? Y[es], N[o]

If you wish to acknowledge ALL of the selected alarms, enter ***Y <Return>***. If you enter ***N <Return>*** you will be returned to the Dispatch Alarm List, where you can select other alarms to view or acknowledge. To exit from the Dispatch Alarms List, press the ***<Esc>*** key.

6)   If the Dispatch Histories capability is enabled, you will next be prompted to enter your name or initials:

Please enter your ID:

Enter your initials, name, or login name. You may enter up 20 characters, and must enter at least two. Hit <Return> to return to the acknowledgment prompt.

If only *<Return>* is entered, the program will return to Step 4 of this procedure. After entering an ID, the user ID is written to the Dispatch Log, along with the center name and time.

7) The Detailed Task Information for each acknowledged alarm is now displayed. If you are using a "browser capable" terminal, you can use the browser keystrokes to move about the alarm(s), or print the information displayed on the screen. An alarm example is shown in SCREEN 3-20.

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

Review Dispatch Alarms
-------------------------------------------------------------------------------
Task #   Device #    Condition                                           Level
-------  ----------  -------------------------------------------------   -----
1930008 N1-112       UG Cable PTD lost  9.0 psi in < 24 hr                ****
                     Reading was  0.0 psi at 14:35 on 07/12/02

Task Dispatch Procedure #1

Probable Cause: Cable Leak, Bad/Stuck Device, Pair Trouble.
Procedure: Use Worksheet D to Determine Area of Search / Locate Trouble.

Device #:  N1-112       Access #: 001A       Type: UP
Address:   1340 E CLIFF DR                   Loc:    1 Pipe:    A

Sheath(s): 1234

--- More Below -------------------------------------------------------------
```

SCREEN 3-20: SAMPLE DISPATCH ALARM

8) After you have finished viewing the desired alarm information, press the *<Esc>* key. The Dispatch List is updated, and will no longer contain the alarms you have just acknowledged and viewed.

9) You will now see the prompt:

Acknowledge Dispatch Alarms for which office?

10) To view or acknowledge another alarm, type in the name or number of the office from the Office List and press *<Return>*. To return to the AlarmMAP Master Menu, do not enter an office, but press *<Return>*.

SEND TEST ALARM TO CENTER

Option #8 of the AlarmMAP Master Menu provides you with the ability to manually send a test alarm to a selected alarm center. This simple check provides confirmation that a new or existing alarm center has been set up properly in PressureMAP and that alarms can actually be sent and received.

AlarmMAP currently has a Master Menu option (#6) to Distribute Alarm Dispatches to Centers. As instructed, it will deliver an alarm to a center provided that: 1) there is an alarm to deliver, 2) that the center references the appropriate office, and 3) that the center is listed in the appropriate call time. The Send Test Alarm to Center option, however, sends a SYSTEM test alarm to the selected alarm center regardless of the center's office list or call time.

Finding the Send Test Alarm to Center Menu

The first step to sending a test alarm to a center is to access the AlarmMAP Master Menu (SCREEN 3-18). The procedure below explains that process. Where you start in this procedure depends upon where you enter the MAP System.

If you log in at the System Options Menu, begin this procedure at Step #1. If you find yourself at the MAP Programs Menu, begin at Step 2. If you have trouble gaining access to the MAP System, contact the MAP System Administrator, or call System Studies Technical Support.

Procedure:

1) From the System Options Menu select MAP Program; enter *1* and press *<Return>*. You should now see the MAP Programs Menu.

2) From the MAP Programs Menu enter *4* and press *<Return>*. Select the office and you should see the AlarmMAP Master Menu shown in SCREEN 3-18 above

3) From the AlarmMAP Master Menu, select Send Test Alarm to Center. Press *8* and *<Return>*. After selecting this option, the program will display the following prompt:

   Send Test Alarm to which Center?

   Please note that you can enter either a Center label (letter designation), the Center name, or a *?*, which provides an Alarm Center selection list.

4) Select a test Center and press *<Return>*. Please note that, starting with PressureMAP Version 26, you are allowed to enter a short comment that will appear in the **Condition** section of the test alarm.

5) If desired, enter a comment to be included with the test alarm. Please limit the comment to 20 characters or less. For example, you may want to enter a simple call back phone number as a comment and specify that someone in the center call you when they receive the test alarm. The test alarm sample shown in SCREEN 3-21 indicates what this test alarm would look like.

```
Dispatch Alarm for <CENTER NAME>                           AlarmMAP XX.XX.XX
08/12/2008  10:36                                     System Studies Incorporated
--------------------------------------------------------------------------------

Task #   Error # Condition                                              Level
-------  ------- ------------------------------------------------------ -----
2250000  992     TEST ALARM! COMMENT: CALL 1-800-123-1234               ****
                                                                        ALRM
```

SCREEN 3-21: SAMPLE TEST ALARM

Note: The test alarm will be sent as a Summary Report, unless the delivery mode for the selected Center is set in the Brief format. Once the alarm is sent, you will be returned to the AlarmMAP Master Menu, where you can send another test alarm if desired.

6)   To send a test alarm to a different Alarm Center, repeat the procedure begging with step 3. To return to the MAP Programs Menu, press *Q* followed by *<Return>*.

QUIT AlarmMAP MASTER MENU

The final menu option is Quit. As the name indicates, this option is used to exit the AlarmMAP Master Menu and return to the MAP Programs Menu.

Procedure:

From the AlarmMAP Master Menu, select *Q*, followed by *<Return>*. When this option is selected, the screen will display the MAP Programs Menu.

If you wish to continue working with the MAP Program, select any of the options listed on this menu. If you have finished working with the program, you may exit the MAP Program by selecting the last menu item on the menu.