VEEDER-ROOT
CURRENT DATA STORAGE INTERFACE MANUAL
for
TLS-300 and TLS-350
UST Monitoring Systems
and
TLS-350R
Environmental & Inventory Management System
through Software Versions 15/115
Manual Number 577013-600
Revision C
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1.0 Introduction

The TLS-300, TLS-350, and TLS-350R Current Data Storage Interface is used for computer systems to access the current UST Monitoring System data without the use of external electrical connections. This data is provided to the computer system from Veeder-Root software products such as TLS-PC.

It is the intent of this interface guide to specify the data format and field definitions of each of the data file types that are available for customer access.

All data is reported in comma delimited, fixed length fields as shown in the data record definition. All data is a numeric string, except for time and date fields. Setup files are provided which include label text fields.

All time-of-day events will be triggered by the TLS time-of-day and not be dependent upon the computer’s time.

The TLS-PC initialization file contains various initialization parameters. This file is divided into different sections containing startup parameters.

The [Data Storage Enable] section contains data storage information that controls what data file type is written to disk. This section contains the definition of the file pathname of the data storage functions that are enabled. The sShortDate definition sets the date string picture of all date fields that are generated by data storage functions. The sTime definition sets the time separator character for all time fields generated by the data storage function.

When the data storage function is enabled, the corresponding value assigned in the [Data Storage Timing] section is used to define the timing interval of the data storage. When an inappropriate value has been assigned to the data storage timing value, the default value will be used. The parameters values are defined as follows:

0 - undefined, use default
1 - once every 30 seconds
2 - once every minute
3 - once every five minutes
4 - once every ten minutes
5 - once every thirty minutes
6 - after alarm status change
7 - after a delivery is complete
8 - once every hour
9 - once every even hour
10 - once every three hours, just after specified time
11 - once per day, just after specified time
Sample initialization file:

[System Area]

[Communications Params]

[Tank Colors]

[Data Storage Enable]
StoragePath=C:\TANKGAGE
sShortDate=MM/dd/yy
sTime=: StartReportTime=00:00
INVENTORY=ON
ALARM_HISTORY=ON
ALARM_STATUS=ON
DELIVERY=ON
BIRPERIOD=ON
BIRSHIFT=ON
SENSOR=ON
TANKTEST=ON
LINELEAK=ON
SETUP=ON

[Data Storage Timing]
INVENTORY_TIMING=1
ALARM_HISTORY_TIMING=6
ALARM_STATUS_TIMING=6
DELIVERY_TIMING=7
ADJ_DELIVERY_TIMING=7
BIRPERIOD_TIMING=9
BIRSHIFT_TIMING=9
SENSOR_TIMING=8
TANKTEST_TIMING=11
LINELEAK_TIMING=10
SETUP_TIMING=11
2.0 Inventory Data

Filename: INVENTORY.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format/units of measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1: Tank number</td>
<td>2 integer value, range 1 - 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2: Date</td>
<td>8 mm/dd/yy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: Time</td>
<td>8 hh:mm:ss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: Volume</td>
<td>12 gallons or liters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: Ullage</td>
<td>12 gallons or liters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6: TC Volume</td>
<td>12 gallons or liters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7: Height</td>
<td>12 inches or mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8: Water Volume</td>
<td>12 gallons or liters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9: Water Height</td>
<td>12 inches or mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10: Temperature</td>
<td>12 degrees Fahrenheit or Celsius</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Typical contents:

```
1,11/14/96,16:12:50, 4205.000000, 5795.000000, 4204.000000, 41.986668, 18.021954, 1.001111, 60.051437
2,11/14/96,16:12:50, 4205.000000, 5795.000000, 4204.000000, 41.986668, 18.021954, 1.001111, 60.051437
3,11/14/96,16:12:50, 4205.000000, 5795.000000, 4204.000000, 41.986668, 18.021954, 1.001111, 60.051437
4,11/14/96,16:12:50, 4205.000000, 5795.000000, 4204.000000, 41.986668, 18.021954, 1.001111, 60.051437
```

Default Initialization parameter
[Data Storage Timing]
INVTRY_TIMING=1

Notes:  
1. This data format is based upon the i201 Serial Interface inquiry command.
2. When enabled, the default update setting is 30 seconds. This file may be updated by using any other data storage timing value (see the table in the Introduction section).
### 3.0 Alarm History Data

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
<th>Width</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>Date</td>
<td>8 mm/dd/yy</td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>Time</td>
<td>8 hh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>3:</td>
<td>Alarm Category</td>
<td>AA - see 111 command</td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td>Sensor Category</td>
<td>cc - see 111 command</td>
<td></td>
</tr>
<tr>
<td>5:</td>
<td>Alarm Type</td>
<td>NN - see 111 command</td>
<td></td>
</tr>
<tr>
<td>6:</td>
<td>Tank Number</td>
<td>2 integer value, range 1 - 16</td>
<td></td>
</tr>
<tr>
<td>7:</td>
<td>Alarm State</td>
<td>2 1 - Alarm cleared 2 - Alarm occurred</td>
<td></td>
</tr>
</tbody>
</table>

Typical contents for Tank 2, Tank Low Limit Alarm cleared
11/14/96, 08:55:32, 2, 0, 5, 2 , 1

Default Initialization parameter
[Data Storage Timing]
ALARM_HISTORY_TIMING=6

Notes: 1. This data format is based upon the i111 and i112 Serial Interface inquiry command and will contain the alarm histories of 50 alarms. The priority and non-priority alarms appear in the same file sorted by date and time.
2. When enabled, this file is updated whenever the alarm status changes.
4.0 Alarm Status Data

Filename: ALRMSTAT.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1</td>
<td>Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>2</td>
<td>Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>3</td>
<td>Alarm Category</td>
<td>2</td>
<td>A - see 111 command</td>
</tr>
<tr>
<td>4</td>
<td>Sensor Category</td>
<td>2</td>
<td>cc - see 111 command</td>
</tr>
<tr>
<td>5</td>
<td>Alarm Type</td>
<td>2</td>
<td>NN - see 111 command</td>
</tr>
<tr>
<td>6</td>
<td>Tank Number</td>
<td>2</td>
<td>integer value, range 1 - 16</td>
</tr>
<tr>
<td>7</td>
<td>Alarm State</td>
<td>2</td>
<td>0 - No Alarm condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 - Alarm occurred</td>
</tr>
</tbody>
</table>

Typical contents for System Normal current condition
11/14/96,10:55:32, 0, 0, 0, 0, 0

Typical contents for Tank 2, Tank Low Limit Alarm
11/14/96,08:55:32, 2, 0, 5, 2, 2

Default Initialization parameter
[Data Storage Timing]
ALARM_STATUS_TIMING=6

Notes:
1. This data format is based upon the i101 Serial Interface inquiry command and will contain
the active alarms. The Sensor Category is set to 0 for all alarms since this field does not
apply to the i101 command. The Alarm State field is set to 2 when the alarm is either
active or has cleared, but not acknowledged at the console.

2. When enabled, this file is updated whenever the alarm status changes. This file may be
updated by using any other data storage timing value (see the table in the Introduction
section).
5.0 Delivery Data

| Column 1 | Tank number | 2 integer value, range 1 - 16 |
| Column 2 | Starting Date | 8 mm/dd/yy |
| Column 3 | Starting Time | 8 hh:mm:ss |
| Column 4 | Ending Date | 8 mm/dd/yy |
| Column 5 | Ending Time | 8 hh:mm:ss |
| Column 6 | Starting Volume | 12 gallons or liters |
| Column 7 | Starting TC Volume | 12 gallons or liters |
| Column 8 | Starting Water | 12 inches or mm |
| Column 9 | Starting Temperature | 12 degrees Fahrenheit or Celsius |
| Column 10 | Ending Volume | 12 gallons or liters |
| Column 11 | Ending TC Volume | 12 gallons or liters |
| Column 12 | Ending Water | 12 inches or mm |
| Column 13 | Ending Temperature | 12 degrees Fahrenheit or Celsius |
| Column 14 | Starting Height | 12 inches or mm |
| Column 15 | Ending Height | 12 inches or mm |

Typical contents:

```
1,07/19/94,12:03:00,07/19/94,12:25:00, 2619.000000, 2638.000000, 0.000000, 49.200001, 7487.000000, 7545.000000, 0.000000, 48.700001, 0.000000, 0.000000
1,07/19/94,12:03:00,07/19/94,12:25:00, 2619.000000, 2638.000000, 0.000000, 49.200001, 7487.000000, 7545.000000, 0.000000, 48.700001, 0.000000, 0.000000
1,07/15/94,17:15:00,07/15/94,17:34:00, 3508.000000, 3536.000000, 0.000000, 48.299999, 7751.000000, 7808.000000, 0.000000, 49.340000, 0.000000, 0.000000
```

Default Initialization parameter
[Data Storage Timing]
DELIVERY_TIMING=7

Note: 1. This data format is based upon the i202 Serial Interface inquiry command.
2. When enabled, this file is updated after a delivery has been completed. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
3. Example shown on two lines for each record. Actual data record remains only on a single line.
4. When the Starting Height and Ending Height is not available, a zero value will be provided.
6.0 Adjusted Delivery Data  (Console with BIR only)

Filename:  ADJDELIV.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format/units of measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1:</td>
<td>Tank number</td>
<td>2</td>
<td>integer value, range 1 - 16</td>
</tr>
<tr>
<td>2:</td>
<td>Starting Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>3:</td>
<td>Starting Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>4:</td>
<td>Ending Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>5:</td>
<td>Ending Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>6:</td>
<td>Starting Volume</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>7:</td>
<td>Ending Volume</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>8:</td>
<td>Adjusted Delivery</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>9:</td>
<td>Adjusted TC Volume</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
</tbody>
</table>

Typical contents:

```
1,07/19/94,12:03:00,07/19/94,12:25:00, 2619.000000, 2638.000000, 49.200001, 48.700001
1,07/15/94,17:15:00,07/15/94,17:34:00, 3508.000000, 3536.000000, 48.299999, 49.340000
```

Default Initialization parameter
[Data Storage Timing]

ADJ_DELIVERY_TIMING=7

Note: 1. This data format is based upon the i20B Serial Interface inquiry command.
2. This data is only available for consoles with BIR
3. When enabled, this file is updated after a delivery has been completed. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
7.0 Business Inventory Reconciliation Data  (Consoles with BIR only)

Filename: BIRPEROD.TXT, BIRSHIFT.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format/units of measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1:</td>
<td>Product Number</td>
<td>2</td>
<td>integer value</td>
</tr>
<tr>
<td>Column 2:</td>
<td>Number of tanks</td>
<td>2</td>
<td>integer value, range 1-16</td>
</tr>
<tr>
<td>Column 3:</td>
<td>Tank number</td>
<td>2</td>
<td>integer value, range 1-16</td>
</tr>
<tr>
<td>Column 4:</td>
<td>Opening Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>Column 5:</td>
<td>Opening Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>Column 6:</td>
<td>Closing Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>Column 7:</td>
<td>Closing Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>Column 8:</td>
<td>Opening Volume</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>Column 9:</td>
<td>Deliveries</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>Column 10:</td>
<td>Metered Sales</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>Column 11:</td>
<td>Manual Adjust</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>Column 12:</td>
<td>Calculated Inventory</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>Column 13:</td>
<td>Physical Inventory</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
<tr>
<td>Column 14:</td>
<td>Water Height</td>
<td>12</td>
<td>inches or mm</td>
</tr>
<tr>
<td>Column 15:</td>
<td>Variance</td>
<td>12</td>
<td>gallons or liters</td>
</tr>
</tbody>
</table>

Typical contents:

0, 1, 1,11/01/93,02:00:00,11/02/93,02:00:00, 9323.000000, 0.000000, 1220.000000, 0.000000, 8103.000000, 8101.000000, 4.490000, -2.000000

Default Initialization parameter
[Data Storage Timing]
BIRPEROD_TIMING=9
BIRSHIFT_TIMING=9

Note:  
1. This data format is based upon the iC03 and iC06 Serial Interface inquiry command.  
2. When enabled, these files are updated once every even hour for consoles that are equipped with the BIR. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).  
3. The BIR Shift data file contains the (completed) previous shift information.  
4. This file will contain the last completed shift or period data only.
8.0 Tank Leak Test Compliance Data

Filename: TANKTEST.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>Tank Number</td>
<td>2</td>
<td>integer value, range 1 - 16</td>
</tr>
<tr>
<td>2:</td>
<td>Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>3:</td>
<td>Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>4:</td>
<td>Leak Report Type</td>
<td>2</td>
<td>For In Tank Leak Test:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 = Most recent gross test</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>passed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 = Most recent annual (.1) test passed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = Most recent periodic (.2) test passed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = Fullest monthly periodic test passed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 = Fullest monthly annual test passed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 = Fullest last reported periodic test passed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 = Fullest last reported annual test passed</td>
</tr>
<tr>
<td>5:</td>
<td>Leak History number</td>
<td>2</td>
<td>nn - (1 - 12) for first monthly tests passed</td>
</tr>
<tr>
<td>6:</td>
<td>Duration</td>
<td>12</td>
<td>Duration of test in hours</td>
</tr>
<tr>
<td>7:</td>
<td>Volume</td>
<td>12</td>
<td>Volume of test in gallons or liters</td>
</tr>
<tr>
<td>8:</td>
<td>Percent</td>
<td>12</td>
<td>Percent volume of full volume</td>
</tr>
<tr>
<td>9:</td>
<td>Reserved</td>
<td>12</td>
<td>Reserved value</td>
</tr>
</tbody>
</table>

Typical contents:

1,11/14/96,10:55:32, 0, 2, 0.000000, 2123.899902, 21.238998, 0.000000
1,09/03/93,23:16:00, 2, 0, 6.000000, 4629.899902, 46.299000, 0.000000

Default Initialization parameter
[Data Storage Timing]
TANKTEST_TIMING=11

Note:
1. This data format is based upon the i207 Serial Interface inquiry commands.
2. When enabled, this file is updated once a day after start time parameter StartReportTime or midnight. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
9.0 Sensor Test Compliance Data

Filename: SENSOR.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1:</td>
<td>Sensor ID</td>
<td>2</td>
<td>1 - Liquid Sensor (301)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 - Vapor Sensor (306)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 - Groundwater Sensor (311)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 - Type A (2 wire) (341)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 - Type B (2 wire) (346)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 - Universal Sensor (34B)</td>
</tr>
<tr>
<td></td>
<td>(see Sensor Setup file)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>Sensor Number</td>
<td>2</td>
<td>integer value, range 1 - 64</td>
</tr>
<tr>
<td>3:</td>
<td>Date</td>
<td>8</td>
<td>mm/dd/yy</td>
</tr>
<tr>
<td>4:</td>
<td>Time</td>
<td>8</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td>5:</td>
<td>Sensor Status</td>
<td>4</td>
<td>0000 = Sensor Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0001 = Sensor Setup Warning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0002 = Sensor Fuel Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0003 = Sensor Open Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0004 = Sensor Short Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0005 = Sensor Water Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0006 = Sensor Dry Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0007 = Sensor High Liquid Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0008 = Sensor Low Liquid Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0009 = Sensor Liquid Warning</td>
</tr>
</tbody>
</table>

Typical contents for Liquid Sensor 1 Normal, Groundwater Sensor 4 Normal
1, 1,11/14/96,10:55:32,0000
3, 4,12/19/96,11:12:00,0000

Default Initialization parameter
[Data Storage Timing]
SENSOR_TIMING=8

Note:
1. This data format is based upon the i301, i306, i311, i341, i346 and i34B Serial Interface inquiry commands.
2. When enabled, this file is updated hourly. This file may be updated by using any other data storage timing value of 2 or larger (see the table in the Introduction section).
10.0 Line Leak Test Compliance Data

Filename: LINELEAK.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1: Line Number</td>
<td>integer value</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2: Pass Test Date</td>
<td>mm/dd/yy</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3: Pass Test Time</td>
<td>hh:mm:ss</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>4: Sensor Type</td>
<td>1 = Volumetric Line Leak</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = PLLD Line Leak</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = WPLL Line Leak</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(see Line Leak Setup file)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: Line Leak Test Type</td>
<td>0 = 0.2 gal/hr Periodic</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = 0.1 gal/hr Annual</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Typical contents:
1,04/14/94,09:31:00, 1, 0, 1
1,10/04/94,02:46:00, 2, 2, 1
1,10/04/94,03:18:00, 2, 1, 1
1,10/04/94,03:18:00, 3, 0, 1

Default Initialization parameter
[Data Storage Timing]
LINELEAK_TIMING=10

Note: 1. This data format is based upon part of the i351, and all of the i385 and i388 Serial Interface inquiry commands.
2. When enabled, this file is updated every three hours, beginning just after the specified start time parameter StartReportTime or midnight. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
3. This file will only contain the last passed annual and last passed periodic test data.
11.0 Tank Setup File

Each tank has a name or location label assigned to it in the console. A relational database file is generated and updated for user database applications which may be required to use these labels instead of numeric identifiers. Other tank setup parameters are provided in this data file.

Filename: TANKSET.TXT

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
<th>Width</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1: Tank Number</td>
<td>2</td>
<td>identifies which tank</td>
<td></td>
</tr>
<tr>
<td>2: Label</td>
<td>20</td>
<td>text name for label</td>
<td></td>
</tr>
<tr>
<td>3: Tank Capacity</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>4: Tank Diameter</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>5: Max Product</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>6: High Product</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>7: Overfill Limit</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>8: Delivery Limit</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>9: Low Product</td>
<td>12</td>
<td>gallons or liters</td>
<td></td>
</tr>
<tr>
<td>10: Product Code</td>
<td>1</td>
<td>ASCII character</td>
<td></td>
</tr>
<tr>
<td>11 - 26: Tanks Manifolded</td>
<td>1</td>
<td>binary digit 1 or 0 for each tank</td>
<td></td>
</tr>
</tbody>
</table>

Tank 16 through Tank 1 in descending order

Typical contents:

1,Regular Unleaded ,10000.000000, 96.000000, 9700.000000, 9500.000000, 9000.000000, 1000.000000, 1500.000000, 1,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,1
2,Unleaded Plus ,10000.000000, 96.000000, 9700.000000, 9500.000000, 9000.000000, 1000.000000, 1500.000000, 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0
3,Unleaded Super ,10000.000000, 96.000000, 9700.000000, 9500.000000, 9000.000000, 1000.000000, 1500.000000, 3,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0

Default Initialization parameter

[Data Storage Timing]
SETUP_TIMING=11

Note:
1. Example shown on two lines for each record. Actual data record remains only on a single line.
2. When enabled, this file is updated once per day after the start time parameter StartReportTime or midnight. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
12.0 Sensor Setup File

Each sensor has a name or location label assigned to it in the console. A relational database file is generated and updated for user database applications which may be required to use these labels instead of numeric identifiers.

Filename: SENSRSET.TXT

<table>
<thead>
<tr>
<th>fields</th>
<th>description</th>
<th>width</th>
<th>format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1:</td>
<td>Sensor ID</td>
<td>2</td>
<td>identifies sensor type (see below)</td>
</tr>
<tr>
<td>2: Label</td>
<td>20</td>
<td>text name for label</td>
<td></td>
</tr>
<tr>
<td>3: Sensor Number</td>
<td>2</td>
<td>identifies which sensor</td>
<td></td>
</tr>
</tbody>
</table>

Sensor ID

1 Liquid Sensor (702)
2 Vapor Sensor (707)
3 Groundwater Sensor (712)
4 Type A (2 wire) Sensor (742)
5 Type B (3 wire) Sensor (747)
6 Universal Sensor (74C)

Typical contents:
3, Groundwater #1 , 1
4, Annular #1 , 1
5, Sump Sensor #1 , 1

Default Initialization parameter

[Data Storage Timing]
SETUP_TIMING=11

Note: 1. When enabled, this file is updated once per day after the start time parameter StartReportTime or midnight. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
13.0 Line Leak Setup File

Each line leak has a name or location label assigned to it in the console. A relational database file is generated and updated for user database applications which may be required to use these labels instead of numeric identifiers.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>Line Leak ID</td>
<td>2</td>
</tr>
<tr>
<td>2:</td>
<td>Label</td>
<td>20</td>
</tr>
<tr>
<td>3:</td>
<td>Sensor Number</td>
<td>2</td>
</tr>
<tr>
<td>4:</td>
<td>Tank assigned</td>
<td>2</td>
</tr>
<tr>
<td>5:</td>
<td>Shutdown rate</td>
<td>2</td>
</tr>
</tbody>
</table>

Field 2 identifies Line Leak sensor type (see below):

1. Volumetric Line Leak Detector (760, 752, 757)
2. PLLD Line Leak Detector (782, 785, 784)
3. WPLL Line Leak Detector (7A2, 7A5, 7A4)

Typical contents:

```
2, PLLD Label 1       , 1, 1, 1
```

Default Initialization parameter

[Data Storage Timing]
SETUP_TIMING=11

Note: 1. When enabled, this file is updated once per day after the start time parameter StartReportTime or midnight. This file may be updated by using any other data storage timing value of 8 or larger (see the table in the Introduction section).
14.0 **Fixed Relationship Files**

Fixed Relationship Files help to define the label for various numeric identifiers. Included below is a listing of each of these data files.

14.1 **Alarm Relationship Files**

For the Alarm History and Alarm Status data files, the following files can be used:

**Alarm/Warning Category, field 3**
Filename: ALMCAT.TXT
0,All Functions Normal
1,System Alarm
2,Tank Alarm
3,Liquid Sensor Alarm
4,Vapor Sensor Alarm
5,Input Alarm
6,Volumetric Line Leak Alarm
7,Groundwater Sensor Alarm
8,Type A Sensor Alarm
12,Type B Sensor Alarm
13,Universal Sensor Alarm
14,Auto-Dial Fax Alarm
18, Mechanical Dispenser Interface Alarm
19, Electronic Dispenser Interface Alarm
20,Product Alarm
21,Pressure Line Leak Alarm
26, Wireless PLLD Alarm

**Sensor Category, field 4**
Filename: SENS CAT.TXT
0,Other
1,Annular
2,Dispenser Pan
3,Monitoring Well
4,STP Sump
5,Piping Sump
Alarm Type Number, field 5
Filename: ALMTYPE.TXT
The alarm category number is the first field in the record, the alarm type number is the second field in this record. (The subsection heading indicates the alarm category is not included in the file.)

System Alarm Category
1, 1, Printer out of Paper
1, 2, Printer Error
1, 3, EEPROM Configuration Error
1, 4, Battery Off
1, 5, Too Many Tanks
1, 6, System Security Warning
1, 7, ROM Revision Warning
1, 8, Remote Display Communications Error
1, 9, Auto-dial Error
1,10, Protective Key Error
1,11, Tank Test Shutdown Warning
1,12, Protective Cover Alarm
1,13, BIR Shift Close Pending
1,14, BIR Daily Close Pending
1,15, PC/H8 Revision Warning
1,16, System Self Test Error
1,17, System Clock Incorrect Warning
1,18, System Device Poll Timeout

Tank Alarm Category
2, 1, Tank Setup Data Warning
2, 2, Tank Leak Alarm
2, 3, Tank High Water Alarm
2, 4, Tank Overfill Alarm
2, 5, Tank Low Limit Alarm
2, 6, Tank Theft Alarm
2, 7, Tank High Limit Alarm
2, 8, Tank Invalid Height Alarm
2, 9, Tank Probe Out Alarm
2,10, Tank High Water Warning
2,11, Tank Delivery Required Warning
2,12, Tank Maximum Level Alarm
2,13, Tank Gross Leak Test Alarm
2,14, Tank Periodic Leak Test Alarm
2,15, Tank Annual Leak Test Alarm
2,16, Tank Periodic Test Warning
2,17, Tank Annual Test Warning
2,18, Tank Periodic Test Alarm
2,19, Tank Annual Test Alarm
2,20, Tank Leak Test Active
2,21, Tank No CSLD Idle Time Warning
2,22, Tank Siphon Break Active
2,23, Tank CSLD Rate Increase Warning
2,24, Tank AccuChart Calibration Warning
2,25, Tank HRM Reconciliation Warning
2,26, Tank HRM Reconciliation Alarm
2,27, Tank Cold Temperature Warning

Sensor Alarm Category 3, 4, 7, 8, 12 or 13
(category 3 is shown only, but this data is repeated for each)
3, 2, Sensor Setup Data Warning
3, 3, Sensor Fuel Alarm
3, 4, Sensor Open Alarm
3, 5, Sensor Short Alarm
3, 6, Sensor Water Alarm
3, 7, Sensor Dry Alarm
3, 8, Sensor High Liquid Alarm
3, 9, Sensor Low Liquid Alarm
3,10, Sensor Liquid Warning

Input Alarm Category
5, 1, Input Setup Data Warning
5, 2, Input Normal
5, 3, Input Alarm

VLLD Alarm Category
6, 1, VLLD Setup Data Warning
6, 2, VLLD Self Test Alarm
6, 3, VLLD Shutdown Alarm
6, 4, VLLD Leak Alarm
6, 5, VLLD Selftest Warning
6, 6, VLLD Pump On Warning
6, 7, VLLD Gross Line Test Alarm
6, 8, VLLD Gross Selftest Alarm
6, 9, VLLD Gross Pump Test Alarm
6,10, VLLD Gross Pump Selftest Alarm
6,11, VLLD Periodic Test Warning
6,12, VLLD Annual Test Warning
6,13,VLLD Periodic Test Alarm
6,14,VLLD Annual Test Alarm
6,15,VLLD Periodic Line Test Alarm
6,16,VLLD Periodic Selftest Alarm
6,17,VLLD Periodic Pump Test Alarm
6,18,VLLD Periodic Pump Selftest Alarm
6,19,VLLD Annual Line Test Alarm
6,20,VLLD Annual Selftest Alarm
6,21,VLLD Annual Pump Test Alarm
6,22,VLLD Annual Pump Selftest Alarm
6,23,VLLD Pressure Warning
6,24,VLLD Pressure Alarm
6,25,VLLD Gross Fault Alarm
6,26,VLLD Periodic Fault Alarm
6,27,VLLD Annual Fault Alarm
6,28,VLLD Fuel Out Alarm

Auto-Dial Fax Alarm Category
14,2,Auto-dial Failed Alarm

Mechanical Dispenser Interface Alarm and Electronic Dispenser Interface Alarm Categories
(only category 18 is shown)
18,2,DIM Disabled Alarm
18,3,DIM Communication Failure Alarm

Product Alarm Category
20,2,BIR Threshold Alarm
20,3,BIR Close Shift Warning
20,4,BIR Close Daily Warning

Pressure Line Leak Alarm Category
21,1,PLLD Setup Data Warning
21,2,PLLD Gross Test Fail Alarm
21,3,PLLD Annual Test Fail Alarm
21,4,PLLD Periodic Test Warning
21,5,PLLD Periodic Test Alarm
21,6,PLLD Sensor Open Alarm
21,7,PLLD High Pressure Alarm
21,8,PLLD Shutdown Alarm
21,9,PLLD High Pressure Warning
21,10,PLLD Pump On Warning
21,11,PLLD Periodic Line Leak
21,12,PLLD Annual Warning
21,13,PLLD Annual Alarm
Wireless PLLD Alarm Category
26, 1,W PLLD Setup Data Warning
26, 2,W PLLD Gross Test Fail Alarm
26, 3,W PLLD Annual Test Fail Alarm
26, 4,W PLLD Periodic Test Warning
26, 5,W PLLD Periodic Test Alarm
26, 6,W PLLD Sensor Open Alarm
26, 7,W PLLD Communications Alarm
26, 8,W PLLD Shutdown Alarm
26, 9,W PLLD Pump On Warning
26,10,W PLLD Periodic Line Leak
26,11,W PLLD Annual Warning
26,12,W PLLD Annual Alarm

14.2 Sensor Compliance Relationship Files

For the Sensor Compliance data files, the following files can be used.

Sensor Status Value, field 3
Filename:  SNSRSTAT.TXT

0000, Sensor Normal
0001, Sensor Setup Data Warning
0002, Sensor Fuel Alarm
0003, Sensor Open Alarm
0004, Sensor Short Alarm
0005, Sensor Water Alarm
0006, Sensor Dry Alarm
0007, Sensor High Liquid Alarm
0008, Sensor Low Liquid Alarm
0009, Sensor Liquid Warning