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ENGINEERING DATA TRANSMITTAL

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# LMHC/TWRS Year 2000 Equipment Project Renovation and Contingency Plan

M. R. Adams  
Lockheed Martin Hanford Corp., Richland, WA 99352  
U.S. Department of Energy Contract DE-AC06-96RL13200

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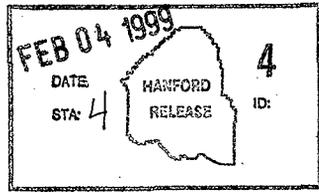
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Approved for Public Release

**LMHC/TWRS YEAR 2000 EQUIPMENT PROJECT RENOVATION AND  
CONTINGENCY PLAN**

HNF- 3575, REV 0

M.R. ADAMS  
E.I. HUSA

JANUARY 1999

LOCKHEED MARTIN HANFORD CORPORATION

YEAR 2000 READINESS DISCLOSURE

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Appendix

A- Equipment Notices

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## 1.0 OBJECTIVE AND PURPOSE

A program has been completed to assess, renovate and document tank farm field equipment year 2000 compliance. A communication plan has also been prepared (see section 8.0). The objective of the program was to assure that no adverse effects occur in tank farm operations as a result of equipment malfunction due to the advent of year 2000.

The purposes of this document are to:

- > describe the process used to assess field equipment
- > document items found to be compliant
- > document items found to be non-compliant including options for making the equipment year 2000 functional and/or tolerant
- > describe location and management of field equipment year 2000 documentation
- > assess overall vulnerability of TWRS field equipment with regard to year 2000 problems
- > describe plans to communicate year 2000 equipment review results and corrective actions.

## 2.0 KEY ASSUMPTIONS

A key assumption of the program for assessing year 2000 compliance for field equipment in TWRS has been that no single review approach could be completely relied upon to make sure all equipment was compliant. Because the equipment lists used within TWRS have certain limitations as to completeness and adequacy and because tank farm drawings also have certain configuration management limitations, a multifaceted approach was selected to overcome the limitations of any single approach. An assessment approach including four paths was selected to assure that tank farm equipment year 2000 issues were identified and addressed to a high degree of assurance. The four path approach included:

- 1- review of Preventative Maintenance System (PM/S) equipment lists to identify makes and models of equipment for evaluation.
- 2- review of Preventative Maintenance Procedures to identify equipment that requires setting of clocks, timers or date related functions.
- 3- review of certain tank farm essential and supporting drawings to identify equipment with potential year 2000 compliance issues.

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4- tank farm walk-downs to verify information collected by other means, to obtain information not available by other means and to identify potential non-compliant equipment not revealed by the above methods.

A complete and detailed description of the protocols used to implement the above approach can be found in HNF-3424, REV 0, "Protocol for Disposition of Tank Farm Equipment Lists and Tank Farm Drawings for Year 2000 Compliance", October 12, 1998.

Another key assumption for the field equipment program involved the recognition that while equipment types and locations could be identified by the above approach and the equipment assessed for year 2000 compliance, all of the "owners" or "responsible persons" of equipment of a given type and model could not be identified with a high degree of certainty. Therefore, a communication program will be implemented to make sure potential owners and users of impacted equipment are aware of the necessary actions for the equipment. (Section 8.0 provides a description of the communication program.)

### 3.0 SUMMARY OF EQUIPMENT DISPOSITION PROCESS

The equipment disposition process included:

- > review of maintenance procedures to identify equipment that may have time or date dependent functions, programmable clocks or imbedded processors that process time or date dependent data
- > review of tank farm equipment lists to identify make and model of potentially non-compliant equipment
- > review of tank essential drawings to identify make and model of potentially non-compliant equipment
- > tank farm walk-downs to verify information collected from list and drawing reviews, to collect make/model information not available by other means and to identify potentially non-equipment not on equipment lists or drawings.

Following completion of the above steps, equipment was evaluated for year 2000 compliance using one or more of the following methods:

- > expert review to determine if equipment has date dependent functions or processing capabilities
- > collection of vendor information by make or model number using the internet or a subcontractor (TAVA)

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> interviews with cognizant engineers and/or operators familiar with the design and operation of the equipment.

Following the evaluation phase, the equipment was separated into lists: the Integrated Index of Compliant Items (IOCI) and the Integrated Potentially Non-Compliant Sublist (PNCS). The first list will assist owners in demonstrating compliance or assuring themselves of compliance. The second list is the subject of "Equipment Notices". The Notices provide owners with options for making their non-compliant equipment either fully functional or tolerant for year 2000 operation. (In most cases non-compliant equipment will remain functional but incorrect date outputs must either be tolerated or an equipment reset function performed after January 1, 1999.) Both of these lists will be communicated to owners particularly the non-compliant list using the communication methods outlined in section 8.0 of this report.

### 4.0 INTEGRATED LIST OF COMPLIANT ITEMS: TWRS FIELD EQUIPMENT

A complete listing of TWRS field equipment derived from the PM/S list has been issued as a separate document for reference and audit purposes. The document, HNF-3537, REV 0, "Integrated List of Compliant Items: TWRS Field Equipment", provides a listing of all makes and models of field equipment examined during the year 2000 compliance project that was found to be year 2000 compliant. The list contains codes or reasons for each item being found compliant. The list does not perfectly correspond to the PM/S list because duplicate or multiple entries of the same make or model have been eliminated. Also, equipment not found to be compliant is not listed. (See section 5.0 of this document for non compliant equipment.)

### 5.0 NON-COMPLIANT ITEMS

Items found not to be year 2000 compliant from procedure reviews, list reviews, drawing reviews, tank farm walk-downs and interviews have been separated and listed in section 5.1. Each non-compliant item is the subject of an "Equipment Notice". An Equipment Notice is posted for items that: a) are year 2000 non-compliant but with a simple fix can be made year 2000 tolerant, b) are exclusively part of a system managed by a separate year 2000 compliance project and plan, or c) the equipment is deactivated but potentially useable for cannibalization of spare parts or d) the non-compliant equipment requires more extensive work to bring the equipment into compliance. The content of the Equipment Notices will be communicated to interested parties by the methods described in section 8.0 of this document.

#### 5.1 Non-Compliant Items: List of Equipment Notices

The following is a list of Equipment Notices are attached in Appendix A:

EN001: Bio-Rad Instrument, FTS-25

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EN002: Bio-Rad Computer, SPC-3200  
EN003: Westronics, SM-100 Multiplexor  
EN004: ThermoQuest, SP-4400 ChromJet  
EN005: Belhaven; FGM-4.0 Flammable Gas Monitor  
EN006: Belhaven; 4.46 Tank Dome Explosive Transmitter  
EN007: Bruel & Kjaer, 1302 Photo Acoustic Multi-Gas Monitor  
EN008: Eurotherm Chessell, 345 Recorder  
EN009: Eberline, PCM-1B Personal Contamination Monitor  
EN010: Eberline, PCM-1B PC Host Program  
EN011: In-Situ Moisture Monitor System  
EN012: Surface Moisture Monitor  
EN013: Yokogawa,  $\mu$ R100 Series Programmable Recorder  
EN014: Westronics Series 3200MB  
EN015: Data Electronics, DT-50 Data Logger  
EN016: Westronics SDI 310/340  
EN017: Data Electronics, R-401 Data Logger  
EN018: Simplex Time Recording Company, 4100-8001 Fire Alarm System

### 5.2 Content of Equipment Notices

Equipment notices contain the following critical information:

- > equipment type, equipment name and equipment make and model
- > location of the equipment (to the extent known)
- > brief reason equipment is not compliant
- > brief description of consequence of year 2000 failure
- > options for making equipment year 2000 compliant or tolerant.

### 6.0 DOCUMENTATION TYPES AND LOCATION

The year 2000 field equipment compliance effort has generated extensive documentation both formal and informal all of which must be managed to prevent loss, assure access and provide traceability. A document file structure has been created for management in the Tank Characterization and Safety Resource Center (TCSRC) located in 2750 E/C-116. The TCSRC and all of the records in it are controlled and managed in accordance with HNF-SD-WM-PROC-021, REV 2, Section 16.

### 7.0 OVERALL ASSESSMENT OF EQUIPMENT VULNERABILITY

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The mission critical systems in TWRS have been the subject of separate year 2000 compliance projects and plans. Nevertheless, the field equipment contained in the mission critical systems (projects) has been evaluated as part of the field equipment effort described in this document. The results of the mission critical systems field equipment evaluation are documented in HNF-3356, REV 2, "Field Equipment Renovation Report for TWRS Mission Critical Systems", January 1999 (release pending).

In addition to field equipment contained in mission critical systems, thousands of field equipment items are deployed in TWRS. In fact, equipment in mission critical systems represents only a small fraction of the equipment in TWRS. A total of 10,434 equipment items have been resolved as a result of the field equipment year 2000 effort. Items of equipment were found that will produce inaccurate date data, printouts and output after the year 2000. In some cases, the owners may be able to tolerate inaccurate date data. In other cases, the equipment can be reset or a protocol can be executed to provide accurate date reporting. The various options for non compliant equipment are spelled out in the Equipment Notices described in section 5.0 above.

### 8.0 COMMUNICATION OF YEAR 2000 EQUIPMENT REVIEW RESULTS

In an effort to alert equipment owners, operators, managers and cognizant engineers to year 2000 non compliant equipment problems, consequences and remedies; a multi-faceted communication program has been adopted. Since cognizant personnel with a need to know cannot always be identified with complete confidence, a communication program was adopted to maximize the number of people notified by formal means.

The elements and schedule for the program are as follows:

- > formal release of pertinent documents. The documents are released to a very limited distribution, but the formal release does provide for a traceable document that can be audited and referenced. (See references in section 9.0.) All project documents listed in section 9.0 shall be formally released/revised by 2/15/99.
- > briefings to engineering and operations groups via staff meetings. The briefings focus on non compliant equipment items that are the subject of Equipment Notices. Briefings have been completed.

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> use of a HLAN website ([http://apftfg01.rl.gov/2750bldg/y2k\\_home.htm](http://apftfg01.rl.gov/2750bldg/y2k_home.htm)) to post notices. The website address will be communicated to engineering and operations groups, the PHMC website and/or by other means. The website shall be operational and populated by 2/28/99.

> a list of cognizant engineers and critical Engineering and Operations managers have been issued a complete set of Equipment Notices.

9.0 REFERENCES

Adams, M.R., HNF-2993, "TWRS Field Equipment Year 2000 Compliance Project Test Plan", Revision 0-A, August 14, 1998.

Adams, M. R. HNF-3410, "Year 2000 TWRS Maintenance Procedure Review Report", Revision 0-A, November 18, 1998.

Adams, M.R. and Johnston, J.A., HNF-3424, "Protocol for Disposition of Tank Farm Equipment Lists and Tank Farm Drawings for Year 2000 Compliance", Revision 0, October 12, 1998.

Adams, M.R. and E.I. Husa, HNF-3356, "Field Equipment Renovation Report for TWRS Mission Critical Systems", Revision 2, January 1999 (release pending).

Adams, M.R., HNF-SD-WM-PROC-021, Revision 2, "Tank Waste Remediation System Process Engineering Instruction Manual", November 3, 1998.

HNF-3575, REV 0

**APPENDIX A: EQUIPMENT NOTICES**

# TWRS Year 2000 Equipment Notice

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Notice Number: EN001  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** BIO-RAD

**Equipment Model:** FTS-25

**Equipment Name:** Spectrometer

**Known Location(s) of Equipment:** To Be Determined

**Owner/Cog Engineer:** GMS-2/D. D. Tate

**Reason for Non-Compliance:**

The FTS-25 spectrometer itself has no date or time function. There is a potential Y2K issue associated with this instrument if the PC interfacing with it is not Y2K compliant. If the instrument is interfaced with a Y2K compliant computer, then the FTS-25 will be Y2K compliant. If this instrument is used with a BIO-RAD 3200 computer, the system may be non-compliant. (See EN002.)

**Consequence of Non-Compliance:**

Date errors may occur. The computer attached to this instrument may need to be manually reset, or other appropriate corrective action may be necessary.

**Recommended Corrective Action:**

If the computer has no Y2K issues, then no corrective action is needed. Otherwise, the specific corrective action would be determined for each non-compliant computer. For a BIO-RAD 3200, see EN002.

**References:** BIO-RAD web site: <http://www.bio-rad.com>

TAVA Plant Y2K One Product Report, Proj. # P01; Item # 7A  
EN002

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## BIO-RAD FTS 25

### Known Component ID Numbers:

TBD None identified in JCS System

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN002  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** BIO-RAD

**Equipment Model:** SPC 3200

**Equipment Description:** Computer

**Known Location(s) of Equipment:** To Be Determined

**Owner/Cog Engineer:** GMS-2/D. D. Tate

## **Reason for Non-Compliance:**

The Bio-Rad proprietary computer model 3200 utilizes Idris software. Date/time for this software is based on the yymmddhhmm (year, month, day, hour, minute) format. The system only recognizes years in the range from 1970 to 1999.

## **Consequence of Non-Compliance:**

Dates beyond year 2000 will not be recognized. Entry of at least four characters following the "date" command is required. If only four characters are entered Idris assumes that they are the last of the yymmddhhmm string, or, hours and minutes. If eight characters are used the system will change the month, day, hour and minute.

## **Recommended Corrective Action:**

Alternatives recommended by the manufacturer include upgrading to current technology or a manual reset of the system. A manual reset of the clock can be performed using the instructions found at <http://www.bio-rad.com/950808.html>. (A single-line statement is all that is necessary to reset the clock outside of the recognized range.)

**References:** BIO-RAD web site: <http://www.bio-rad.com>

TAVA Plant Y2KOne Product Report, Proj. # P01; Item # 8A  
EN001  
CVI File 22129 Supplement 063 (Software Manuals)

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## BIO-RAD SPC 3200

### Known Component ID Numbers:

TBD None identified in JCS System

NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN003

January 19, 1999

Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this equipment.

**Equipment Manufacturer/Make:** Westronics

**Equipment Model:** SM 100

**Equipment Name:** Smart Multiplexor

**Known Location(s) of Equipment:** To Be Determined

**Owner/Cog Engineer:** TMACS/M. J. Holm

**Reason for Non-Compliance:**

This instrument maintains the date in a two-digit format. The century is not displayed, printed, or used internally for any purpose according to Westronics. All versions of Westronics firmware for this product is compliant.

**Consequence of Non-Compliance:**

Owner should realize that date will continue in two digit format. Be aware of equipment incompatibilities unrelated to Y2K compliance issues.

**Recommended Corrective Action:**

None.

**References:** <http://www.westronics.com/Y2KWEB/Y2K.htm>

TAVA Plant Y2KOne Product Report, Proj. # P01; Item # 31A

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Westronics SM 100 multiplexors

### Known Component ID Numbers:

TBD None identified in JCS System

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN004  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** ThermoQuest  
(Formerly Spectra Physics)  
**Equipment Model:** SP 4400  
**Equipment Name:** ChromJet Integrator  
**Known Location(s) of Equipment:** To Be Determined  
**Owner/Cog Engineer:** GMS-2/D. D. Tate

**Reason for Non-Compliance:**

Units shipped prior to October 30, 1998 use only 2 digits to store the year. Non-compliant units will require a programming change to provide Year 2000 compliance with the 4-digit year designation. Note: Manual for this instrument in CVI file indicates date is entered after self-test when system power is turned on. Manual is © 1991.

**Consequence of Non-Compliance:**

Unknown. None given by vendor.

**Recommended Corrective Action:**

Modify code as directed by the ThermoQuest web site:  
[http://www.thermoquest.com/Questcare/y2k\\_int.html](http://www.thermoquest.com/Questcare/y2k_int.html).

**References:** ThermoQuest web site

TAVA Plant Y2KOne Product Report, Proj. # P01; Item #26A  
Certified Vendor Information (CVI) File 22129, Supplement 062

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## ThermoQuest (SpectraPhysics) SP4400

### Known Component ID Numbers:

TBD. None identified in JCS System

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN005  
January 20, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Belhaven  
**Equipment Model:** FGM-4.0  
**Equipment Name:** Flammable Gas Monitor  
**Known Location(s) of Equipment:** 241-T; 241-SX  
**Owner/Cog Engineer:** W. F. Zuroff/R. E. Larson

**Reason for Non-Compliance:**

Vendor has not provided any definitive Year 2000 compliance information for this specific equipment. The unit appears to be compliant, however, compliance has not been guaranteed at this time. (See corrective action below.) Certified Vendor Information (CVI File #50011) indicates that an internal battery backup exists to maintain power for the CPU.

**Consequence of Non-Compliance:**

The impact of the Year 2000 rollover is unknown.

**Recommended Corrective Action:**

There are no provisions to input date when powering up this unit and the unit is assumed to be compliant. However, vendor data and TWRS procedures do not address replacement of the backup battery. It is recommended that the owner should develop a remedy or contingency procedure to "work-around" the unit in case of simultaneous loss of primary and battery backup power sources.

**References:** Certified Vendor Information File (CVI) #50011  
TAVA Plant Y2KOne Product Report , Proj. # P01; Item # 5A

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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**Belhaven FGM 4.0 Flammable Gas Monitor**  
(Safety Class III)

Known Component ID Numbers:

SALW-AE-6010P  
SALW-AIT-6013J  
SALW-AT-6010Q

\*NOTE: A total of 7 of these specific components exist on site. All have not yet been placed in the field. This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN006  
January 20, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment may not be Year 2000 compliant. Please read and implement this notice if you have responsibility for this equipment.

**Equipment Manufacturer/Make:** Belhaven

**Equipment Model:** 4.46

**Equipment Name:** Flammable Gas Monitor (Identified as  
"Tank Dome Explosive Xmit" in JCS  
record)

**Known Location(s) of Equipment:** 241-A

**Owner/Cog Engineer:** W. F. Zuroff/R. L. Powers

**Reason for Non-Compliance:**

Vendor has not identified any Year 2000 compliance issues and believes that no problems exist. Systems involve 3 microprocessors, two with on board real time clocks (RTC) and one that does not have a RTC. Certified Vendor Information (CVI File #22776) indicates that an internal battery backup exists to maintain power for the CPU.

**Consequence of Non-Compliance:**

The impact of the year 2000 rollover is unknown.

**Recommended Corrective Action:**

There are no provisions to input date when powering up this unit and the unit is assumed to be compliant. However, vendor data and TWRS procedures do not address replacement of the backup battery. It is recommended that the owner should develop a contingency procedure to "work-around" the unit in case of simultaneous loss of primary and battery backup power sources.

**References:** Correspondence from Belhaven Applied Technologies to LMHC dated 11-17-98.

Certified Vendor Information (CVI) File #22776

TAVA Plant Y2KOne Product Report , Proj. # P01; Item # 4A

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Belhaven Model FGM 4.46

According to CVI file data: Safety Class I Equipment per WHC-CM-4.46

### Known Component ID Number\*:

SALW-AIT-820A

\*NOTE: A total of 11 of these components exist on site. At this time, only one has been installed in the field. The remainder are to be placed in the field over the next 2 years. This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN007  
January 13, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this equipment.

**Equipment Manufacturer/Make:** Brüel & Kjaer (INNOVA Air Tech Instruments)  
(U. S. Distributor: California Analytical Instruments, Inc.)

**Equipment Model:** 1302

**Equipment Name:** Photo Acoustic Multi-Gas Monitor

**Known Location(s) of Equipment:** SHMS, GMS-2, 241-SY, 241-A,  
241-AW, 241-AN, 241-BY, 241-S,  
241-SX, 241-U

**Owner/Cog Engineer:** TBD

## **Reason for Non-Compliance:**

The Year 2000 changeover will impact the date stamp of this model.

## **Consequence of Non-Compliance:**

The internal clock of this instrument will transition from 1999-31-12 to 1900-01-01 at the turn of the Year 2000. If the clock makes the transition when a measurement has been taken, no data will be lost, and it will still be possible to retrieve the data, but the wrong day/year may be printed on the output. The leap year of 02/29/2000 is not handled correctly either. Subsequent leap years may or may not be handled properly. A power loss to the analyzer or an analyzer "Full Reset" will necessitate resetting of the clock.

## **Recommended Corrective Action:**

It will be necessary to manually set the clock to 2000-01-01 after the Y2K roll over. Every full reset of the Brüel & Kjaer gas monitor after the Y2K roll over date (01/01/2000) will also require that the date be manually set to the current date. A manual reset will be required to adjust for leap year on 02/29/2000. Manual reset may also be required for February 29 in subsequent leap years.

# TWRS Year 2000 Equipment Notice

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**References:** Brüel & Kjaer, INNOVA AirTech Instruments and California Analytical Instruments, Inc.  
TAVA Plant Y2KOne Product Report , Proj. # P01; Item # 142

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Brüel & Kjaer Model 1302:

### Known Component ID Numbers:

A101-SHM-NIT-052  
AN101-SHM-NIT-052  
AN241-SHM-NIT-052  
AP104-SHM-NIT-052  
AW241-SHM-NIT-052  
BY105-SHM-NIT-052  
S106-SHM-NIT-052  
S109-SHM-NIT-052  
SX103-SHM-NIT-052  
SY102-SHM-NIT-052  
U105-SHM-NIT-052  
NE/NY-01MSY-29-1  
NE-NT-01MSY-29-1  
NE/NT-01MSY-29-1

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Other examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN008  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer:** Eurotherm Chessell Recorders

**Equipment Model:** 345

**Equipment Name:** Digital Display Chart Recorder

**Known Location(s) of Equipment:** 241-SY

**Owner/Cog Engineer:** To Be Determined

## **Reason for Non-Compliance:**

Only a two-digit year date is used. Manufacturer indicates Software version 5.2 (Issue 9) has been tested with and without the communication option (Issue 4). Date and time correcting is required on 01/01/2000. Equipment must be manually reset to a "00" year date after December 31, 1999. The leap year in Year 2000 may also not be recognized by this equipment.

## **Consequence of Non-Compliance:**

Printed date may be in error if the instrument is not reset. Manufacturer's data does not specify the date format that will be printed if recorder is not reset to reflect the correct day/month/year after 01/01/2000. Manufacturer has not specified if the instrument will recognize year 2000 as a leap year.

## **Recommended Corrective Action:**

Recommend testing the unit by setting the timer for December 31, 1999, and checking the next day's date output. Also, it is suggested to test the leap year transition between February 28, February 29, and March 1 for years 2000 and 2004. If test results indicate output dates are incorrect but all functions are operational, then manually resetting the internal clock should be an effective action to remedy the problem. The basic functions of the recorder will most likely continue to be operational even though the wrong day/year may appear on the output and printouts. The Manufacturer recommends that since this instrumentation is used as a component within a system, it is recommended that the whole system be tested for year 2000 compliance due to potential hardware incompatibilities in registering the date. Procedures and/or desktop instructions should be implemented to address manual resetting of the internal clock.

**References:** Eurotherm Chessell [www.eurotherm.com](http://www.eurotherm.com)

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HMP-3575, REV 0

# TWRS Year 2000 Equipment Notice

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**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## EuroTherm Chessell Model 345 Recorder\*

Known Component ID Numbers:

FR-E5-2-1  
SY271-VTP-FR-120  
SY271-WST-PR-313A (Former: PR-101-1-6)

Cog Engineer per JCS:

J. N. Doeler

\*Note: Records have also incorrectly identified the Model 345 recorder as being manufactured by "Chessey", and "Chessell-Taylor". The manufacturer "Chessey" does not exist. Taylor instruments, now a subsidiary of ABB Instrumentation manufactured recorders in competition with Chessell. Taylor instruments did not manufacture a model 345.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN009  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Eberline

**Equipment Model:** PCM-1B

**Equipment Name:** Personnel Contamination Monitor

**Known Location(s) of Equipment:** 200 East and West Areas

**Owner/Cog Engineer:** To be Determined

**Reason for Non-Compliance:**

The clock is a hardware device that maintains the year in a 0 to 99 year format. Century data is not maintained. Program use of the clock is limited to year, month, day, minutes and seconds only. Century calculations are not performed by the PCM-1B.

**Consequence of Non-Compliance:**

The date imprint is a cosmetic problem only and does not impact the operation of the unit. With non-compliant firmware versions, the program will display and print "1 JAN :0" or "1 JAN A0" when Year 2000 arrives. Also, the unit may not recognize Year 2000 as a leap year.

**Recommended Corrective Action:**

Determine the program part number and firmware version. Check these against the list on the Eberline web page at <http://www.eberlineinst.com/yr2000/yr2000.htm>. If the device is non-compliant, use the SET CLOCK MENU item to reset the clock after Jan. 1, 2000. After editing the date should display and print as 1 JAN 00. It may also be necessary to use SET CLOCK MENU to adjust for leap year on Feb. 29, 2000.

Eberline recommends purchasing and installing compliant firmware, which will bring the unit into full compliance. The PCM-1B requires two EPROMs, costing (approximately) \$50 each from Eberline.

**References:** Eberline web site <http://www.eberlineinst.com/yr2000/yr2000.htm>

EN010

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

Year 2000 Readiness Disclosure

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# TWRS Year 2000 Equipment Notice

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## Eberline PCM-1B Personnel Contamination Monitor

Known Component ID Numbers\*:

Cog Engineer per JCS:

RPM-PCM-1039-01  
RPM-PCM-1040-01  
RPM-PCM-1041-01  
RPM-PCM-1051-01  
RPM-PCM-1052-01  
RPM-PCM-1053-01  
RPM-PCM-1061-01  
RPM-PCM-1128-01  
RPM-PCM-1131-01  
RPM-PCM-1379-01  
RPM-PCM-569-01  
RPM-PCM-573-01  
RPM-PCM-601-01  
RPM-PCM-1040-01  
RPM-PCM-1042-01  
RPM-PCM-1043-01  
RPM-PCM-1044-01  
RPM-PCM-1048-01  
RPM-PCM-1049-01  
RPM-PCM-1050-01  
RPM-PCM-1159-01  
RPM-PCM-563-01  
RPM-PCM-569-01  
RPM-PCM-828-01  
RPM-PCM-943-01

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN010  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Eberline

**Equipment Model:** PCM-1B PC Host Program

**Equipment Name:** Software

**Known Location(s) of Equipment:** 200 East and West Areas

**Owner/Cog Engineer:** To be Determined

**Reason for Non-Compliance:**

Software with version numbers before 2.03 will not be compliant. All later versions starting from 2.03 are Y2K compliant.

**Consequence of Non-Compliance:**

The date imprint is a cosmetic problem only and does not impact the operation of the unit. With non-compliant versions, the program will display and print "1 JAN :0" or "1 JAN A0" when Year 2000 arrives. Also, the unit may not recognize Year 2000 as a leap year.

**Recommended Corrective Action:**

Verify version of software in use. Check these against the list on the Eberline web page at <http://www.eberlineinst.com/yr2000/yr2000.htm>. If the device is non-compliant, use the SET CLOCK MENU item to reset the clock after Jan. 1, 2000. After editing the date should display and print as 1 JAN 00. Since this is a cosmetic problem, a manual reset of the clock is sufficient to correct the problem. It may also be necessary to use SET CLOCK MENU to adjust for leap year on Feb. 29, 2000.

Eberline recommends purchasing and installing a software upgrade, which will bring the unit into full compliance. The cost is (approximately) \$50 from Eberline.

**References:** Eberline web site <http://www.eberlineinst.com/yr2000/yr2000.htm>

EN009

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Eberline PCM-1B Personnel Contamination Monitor

Known Component ID Numbers:

Cog Engineer per JCS:

RPM-PCM-1039-01  
RPM-PCM-1040-01  
RPM-PCM-1041-01  
RPM-PCM-1051-01  
RPM-PCM-1052-01  
RPM-PCM-1053-01  
RPM-PCM-1061-01  
RPM-PCM-1128-01  
RPM-PCM-1131-01  
RPM-PCM-1379-01  
RPM-PCM-569-01  
RPM-PCM-573-01  
RPM-PCM-601-01  
RPM-PCM-1040-01  
RPM-PCM-1042-01  
RPM-PCM-1043-01  
RPM-PCM-1044-01  
RPM-PCM-1048-01  
RPM-PCM-1049-01  
RPM-PCM-1050-01  
RPM-PCM-1159-01  
RPM-PCM-563-01  
RPM-PCM-569-01  
RPM-PCM-828-01  
RPM-PCM-943-01

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN011

January 19, 1999

Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Hanford Site Fabricated

**Equipment Model:** Does Not Apply

**Equipment Name:** In Situ Moisture Monitoring System

**Known Location(s) of Equipment:** To Be Determined

**Owner/Cog Engineer:** Steve Metcalf, NHC

**Reason for Non-Compliance:**

Components comprising this system have not been evaluated for Y2K consequences.

**Consequence of Non-Compliance:**

Unknown. Non-compliance is not expected to impact the TWRS mission. This equipment is in the process of being transferred to WSU for use as an educational training tool.

**Recommended Corrective Action:**

Tag the equipment to identify that it may not be Y2K compliant and note that Y2K evaluation is required if the equipment is to be used for any future DOE sponsored research or monitoring on the Hanford Site.

**References:** EN012

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

To Be Determined – not identified in JCS

# TWRS Year 2000 Equipment Notice

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Notice Number: EN012  
January 20, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Hanford Site Fabricated

**Equipment Model:** Does Not Apply

**Equipment Name:** Surface Moisture Monitoring System

**Known Location(s) of Equipment:**

**Owner/Cog Engineer:** Steve Metcalf, NHC

**Reason for Non-Compliance:**

Components comprising this system have not been evaluated for Y2K consequences.

**Consequence of Non-Compliance:**

Unknown. Non-compliance is not expected to impact the TWRS mission. This equipment is in the process of being transferred to WSU for use as an educational training tool.

**Recommended Corrective Action:**

Tag the equipment to identify that it may not be Y2K compliant and note that Y2K evaluation is required if the equipment is to be used for any future DOE sponsored research or monitoring on the Hanford Site.

**References:** EN011

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN013  
January 18, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Yokogawa Industrial Automation  
Yokogawa Corporation of America  
(YCA)(YEW)

**Equipment Model:**  $\mu$ R 100 Series (415# Series)

**Equipment Name:** Programmable Chart Recorder

**Known Location(s) of Equipment:** 241-SY, 244-TX, 241-AW, 241-AN,  
244-AR, 241-BY

**Owner/Cog Engineer:** To Be Determined

## Reason for Non-Compliance:

Yokogawa  $\mu$ R100 recorders shipped prior to March, 1988 may lock up at midnight on December 31, 1999. The calendar year will be displayed as 0A instead of correctly displaying two digits such as 00. These recorders have been obsolete for a number of years. The manufacturer has no plans to modify the software since the date is only a marker on the chart. Recorders manufactured and shipped after March, 1988 are equipped with a two-digit year clock that recognizes "00" to the year 2000 and a leap year.

## Consequence of Non-Compliance:

Recorders manufactured before March, 1988 will output an incorrect year and will not detect the 2000 leap year. All other recorders should work properly. The manufacturer cautions that customer software used in conjunction with the RS232/422 output from any recorder may not be Year 2000 compliant and should be verified.

## Recommended Corrective Action:

To determine the year a recorder was manufactured, examine the serial number. In most cases the year of manufacture is printed after the serial number on the tag. If it is not, the serial number can be read as follows: ##LL### where # equals a number and L equals a letter. The second number is the year. Since many recorders were manufactured in both the 1980's and the 1990's, there may

## TWRS Year 2000 Equipment Notice

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be an overlap (for instance 1985 and 1995). In the case of recorders manufactured in the 1980's, the year indicator is preceded by the number 4. Therefore, a serial number beginning "45" would have been manufactured in 1985 while a serial number beginning "75" would have been manufactured in 1995.

Recorders manufactured before 1989 will indicate or print "0A" instead of "00" after the year 2000 rollover. To correct, simply turn off the unit and turn it back on using the power switch. The year must then be manually reset to "00". The year 2000 will not be recognized as a leap year. Duplicate this process for 2/28 or 3/1 to fix the leap year problem.

**References:** Yokogawa Web Sites: [www.yca.com](http://www.yca.com) or [www.yokogawa-ia.com](http://www.yokogawa-ia.com)

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Yokogawa Programmable Chart Recorder $\mu$ R 100 Series (415# Series)

### Known Component ID Numbers:

Cog Engineer per JCS:

NR-01-K-SY-6-1  
NR-01-K-SY-12-1  
NR-01-K-SY-11-1  
SALW-WFR-6001J  
PS-H-2  
AIR-P-2/3  
FS-L-2  
FIR-A-2(4T017-3  
PIR-A-2  
FS-L-1  
AIR-P-1  
PS-H-1  
FIR-A-1(4T016-3  
NR-03-J-SY-6-1  
NR-03-JSY-12-1  
NR-01-L-SY-6-1  
NR-01-J-SY-12-1  
NR-03-J-SY-12-1  
JR-12-J-S-6-1  
NR-01-JSY-6-1  
NR-03-J-SY-11-1  
NR-01-J-SY-11-1  
FIR-A-2  
FIR-A-1  
AMPS-P-1  
AMPS-P-2  
AMPS-P-2/3  
AMPS-P-3  
PIR-A-2(4T092-2  
PIR-A-1  
AW101-SHM-NSH-054  
AW101-SHM-NSH-055  
AN107-SHM-NSH-055  
AN103-SHM-NSH-054  
AN103-SHM-NSH-055  
AN107-SHM-NSH-054  
VTP-NR-1254C

Note: Identified as "Yokagawa" in JCS records. This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN014

January 15, 1999

Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this equipment.

**Equipment Manufacturer/Make:** Westronics

**Equipment Model:** Series 3200/MB

**Equipment Name:** 250mm Multi-Bank Color Chart  
Recorder

**Known Location(s) of Equipment:** AP Farm

**Owner/Cog Engineer:** K. A. White

## **Reason for Non-Compliance:**

The Series 3200MB does not allow the date to be set to February 29th. (Limits operator input to 28 day month). Per Westronics, all firmware versions of the Series 3200MB are considered compliant. All Special versions of the firmware (RGxxxx) are also considered compliant.

## **Consequence of Non-Compliance:**

Once every 4 years (leap year), the date may not be set to Feb 29th.

## **Recommended Corrective Action:**

If setting the date in February, during a leap year, either set the date prior to, or after February 29th.

**References:** <http://www.westronics.com/Y2KWEB/3200mb.htm>

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Westronics Series 3200/MB color Chart Recorders

### Known Component ID Numbers:

MON-101 (AP Farm, Drawing H-14-020603, R.1; sheet 1-4)  
MON-102 (AP Farm, Drawing H-14-020603, R.1; sheet 5-8)

\*Note: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN015  
January 20, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Data Electronics

**Equipment Model:** Data Taker 50 (DT 50)

**Equipment Name:** Data logger

**Known Location(s) of Equipment:** 2727-W

**Owner/Cog Engineer:** To Be Determined

## **Reason for Non-Compliance:**

Data in CVI files indicates use of "Decipher Plus" software release 1.1 and ROM version 3.3. The manufacturer has indicated Series 1 devices with ROM versions prior to 4.02 and Series 2 devices with ROM versions prior to 5.00 should be upgraded to provide the proper date. All ROM versions including and after Series 1 4.02 and Series 2 5.00 are Y2K compliant.

## **Consequence of Non-Compliance:**

For non-compliant firmware versions, the program will not display and print "1 JAN 00" when the Year 2000 arrives. Additionally, the unit may not recognize year 2000 as a leap year. This does not impact the operation of the unit.

## **Recommended Corrective Action:**

Date Electronics recommends purchasing and installing a ROM upgrade, which will bring the unit into full compliance. The manufacturer has noted that all software testing was performed using PC's with Year 2000 compliant BIOS. The software operates on the assumption that the PC on which it is running has a Year 2000 compliant BIOS.

**References:** Phone conversation with Diane Ball on 12/17/98  
Compliance Statement from internet web page  
[www.datataker.com](http://www.datataker.com)  
Review of Certified Vendor Information Files 22673 and 22780  
TAVA Plant Y2KOne Product Report , Proj. # P01; Item # 11A

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Data Electronics Data Taker 50 Data Logger

Known Component ID Numbers:

Cog Engineer per JCS:

RM-MON-3102T

TBD None identified in  
JCS System

Note: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN016  
January 19, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this equipment.

**Equipment Manufacturer/Make:** Westronics

**Equipment Model:** SDI 310/340

**Equipment Name:** Smart Digital Indicator

**Known Location(s) of Equipment:** AY Farm Building 241-AY-801A

**Owner/Cog Engineer:** To Be Determined

## Reason for Non-Compliance:

Per Westronics, all firmware versions of the SDI 310/340 at, or higher than 1.1B are considered compliant. All Special versions (RDxxxxx) based at, or higher than 1.1B are considered compliant. All firmware versions of the SDI 310/340 lower than 1.1B are considered non-compliant. The following are exceptions to compliance as noted by Westronics:

- The SDI 310/340 does not allow the date to be set to February 29th. (Limits operator input to 28 day month).
- Setting the time-of-day at the SDI 310/340 may result in the actual time taken by the instrument to be 1 minute behind that intended.
- The SDI 310/340 with a firmware version *lower* than 1.1B does not allow the operator to set a date beyond the year 1998.

## Consequence of Non-Compliance:

- Once every 4 years (leap year), the date may not be set to Feb 29th.
- The time-of-day, as displayed may be 1 minute slow.
- The date, as displayed at the front panel, will be incorrect. The SDI 310/340 firmware performs a date boundary check at power up and if the year is beyond 98, will set the clock to midnight and the date to January 1, 1985.

## Recommended Corrective Action:

- If setting the date in February, during a leap year, either set the date prior to, or after February 29th.
- Try resetting the time-of-day.

## TWRS Year 2000 Equipment Notice

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- Verify firmware version. The date may be set to 10 years earlier than the current year.

### Determining Instrument Compliance:

The SDI 310/340 firmware version number may be determined by two methods:

- Entering "Factory Sysgen" by using the front panel keyboard. The full version number will be displayed for approximately 3 seconds. Review the SDI 310/340 Manual for the exact keyboard sequence to enter "Factory Sysgen".  
Note: Entering "Factory Sysgen" effectively takes this instrument off-line. Process signal input monitoring will halt until this mode is exited using the front panel keyboard.
- Powering down the instrument, removing the "slide-out chassis" and noting the labels affixed to the chips (EPROMS) mounted on the memory circuit card.

**References:** Westronics internet page: <http://www.westronics.com/Y2KWEB/3200mb.htm>  
TAVA Plant Y2KOne Product Report , Proj. # P01; Item # 31A

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## Westronics SDI 310/340 Data Logger

### Known Component ID Numbers:

Data Logger (AY Farm, Drawing H-2-64400, R.4; sheets 6&7)

Note: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN017  
January 20, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Data Electronics

**Equipment Model:** DT 605 60 Hz Version 3.45 ROM

**Equipment Name:** Data Taker Data Logger

**Known Location(s) of Equipment:** AN Farm

**Owner/Cog Engineer:** To Be Determined

## **Reason for Non-Compliance:**

Data Electronics has reviewed and tested its products for Year 2000 compliance. The DataTaker DT605 data logger 60 Hz Version 3.45 ROM is indicated as non-compliant by Data Electronics. The units were tested both with and without the following accessories: DS1216F real time clock and Channel expansion module. All software testing was carried out on PCs with Year 2000 compliant BIOS. Data Electronics software operates under the assumption that the PC on which it is running has a 2000 compliant BIOS.

## **Consequence of Non-Compliance:**

Year 2000 non compliance will not impact operation of the unit. ROM v. 3.43 has calculated the date in days since 1989 and did not incorporate year 2000 roll over or leap year provisions. If the unit is operating on line, there will be no interruption of operations. The unit will continue to take readings and transmit data. However, the date stamping may be in error if that feature is used.

## **Recommended Corrective Action:**

Upgrade ROM to v. 4.02 with a Real Time Clock.

**References:** Compliance Statement from internet web page:

<http://www.datataker.com>

TAVA Plant Y2KOne Product Report , Proj. # P01; Item # 11A

Phone conversation with Rick Elfing, Data Electronics Tech Support (1-800-9-LOGGER) 1/20/99.

**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

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# TWRS Year 2000 Equipment Notice

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## Data Electronics Data Taker 605 Data Logger

### Known Component ID Numbers\*:

R-401 (Drawing H-14-020601 sh. 11)

### Cog Engineer per JCS:

TBD None identified in  
JCS System

\*Note: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown. Examples of this equipment may exist in the field.

# TWRS Year 2000 Equipment Notice

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Notice Number: EN018  
January 20, 1999  
Revision 0

**Attention:** TWRS Equipment Owners, Operators, and Cognizant Engineers

The TWRS Year 2000 compliance assessment team has determined that the following equipment is not Year 2000 compliant. Please read and implement this notice if you have responsibility for this make and model of equipment.

**Equipment Manufacturer/Make:** Simplex Time Recording Company

**Equipment Model:** 4100-8001

**Equipment Name:** Fire Alarm System

**Known Location(s) of Equipment:** 241AZ271

**Owner/Cog Engineer:** T. J. Kelley, Building Manager  
(373-5903)

**Reason for Non-Compliance:**

The 4100 series Fire Alarm Control Panel (Software Version 6.04, 7.03, 8.02, or older) is Y2K compliant. However, when the date advances beyond December 31, 2003, the History log and printing reverts to 1988 for versions 6.04, 7.03, and 8.02. Older versions may have similar date stamping issues.

**Consequence of Non-Compliance:**

When the date advances beyond December 31, 2003, the History log and printing reverts to 1988 for versions 6.04, 7.03, and 8.02. The manufacturer's data does not indicate any operational concerns.

**Recommended Corrective Action:**

Verify version installed in the facility. According to the manufacturer, "Recommend upgrading panel software version 6.04 or older to version 6.05; versions 7.03 or older, and 8.02 or older to version 8.03 or later if desired." Note: The facility manager has the primary responsibility for all systems within their facility. The Hanford Fire Department (HFD) provides a fire protection system testing and maintenance service to the facility. Facility managers are responsible for ensuring fire protection systems are tested and maintained as required per HNF-PRO-351. The facility manager and LMHC TWRS Fire Protection Engineering should coordinate corrective actions with the HFD.

**References:** Drawings H-2-131291, H-2-131292, H-2-131293, H-2-131294, H-2-131295, H-2-131296, H-2-131297, H-2-131298  
Certified Vendor Information File (CVI) 22525, Supplement 088  
Simplex internet home page: <http://www.simplexnet.com>  
TAVA Plant Y2KOne Product Report, Proj. # P01; Item # 25A

# TWRS Year 2000 Equipment Notice

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**Questions:** Contact Ivar Husa at 373-4850.

See attachment for known equipment ID/Property numbers of instances with this make and model.

# TWRS Year 2000 Equipment Notice

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## **SIMPLEX 4100-8001 Fire Alarm Control Panel**

### Known Component ID Numbers:

Fire Alarm Panel is located in 241-AZ-271

\*NOTE: This listing represents components of this make and model that could be readily identified in the Job Control System (JCS) Preventive Maintenance System (PM/S), on drawings where make and model was evident and from field walkdown.

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Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
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